



CITY OF ANN ARBOR ENGINEERING

RUSSELL STREET IMPROVEMENTS

RFP No. 22-50, FILE No. 2021-010
BID SET 05/16/22

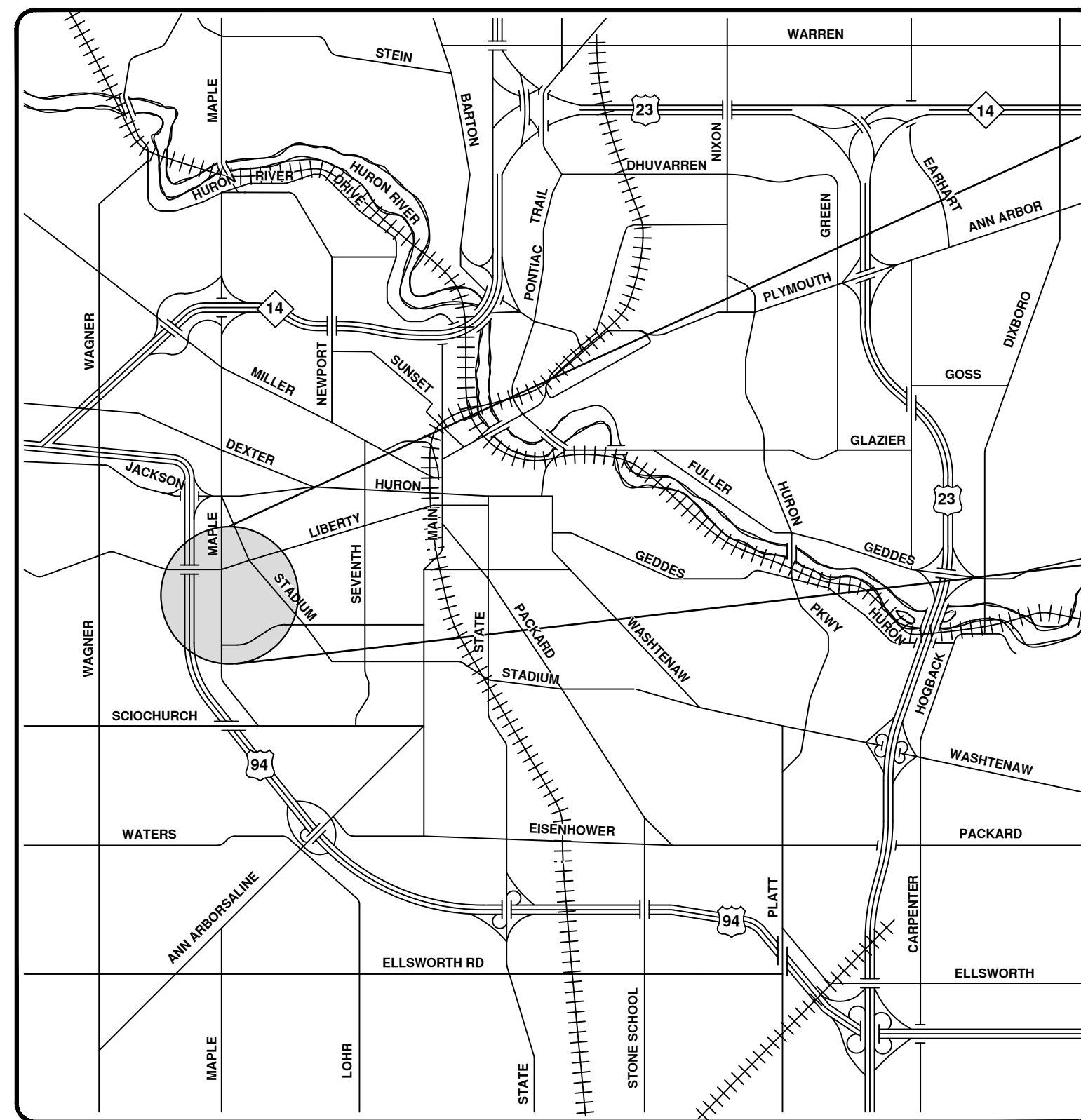
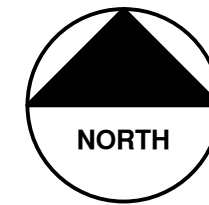
NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, 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 MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

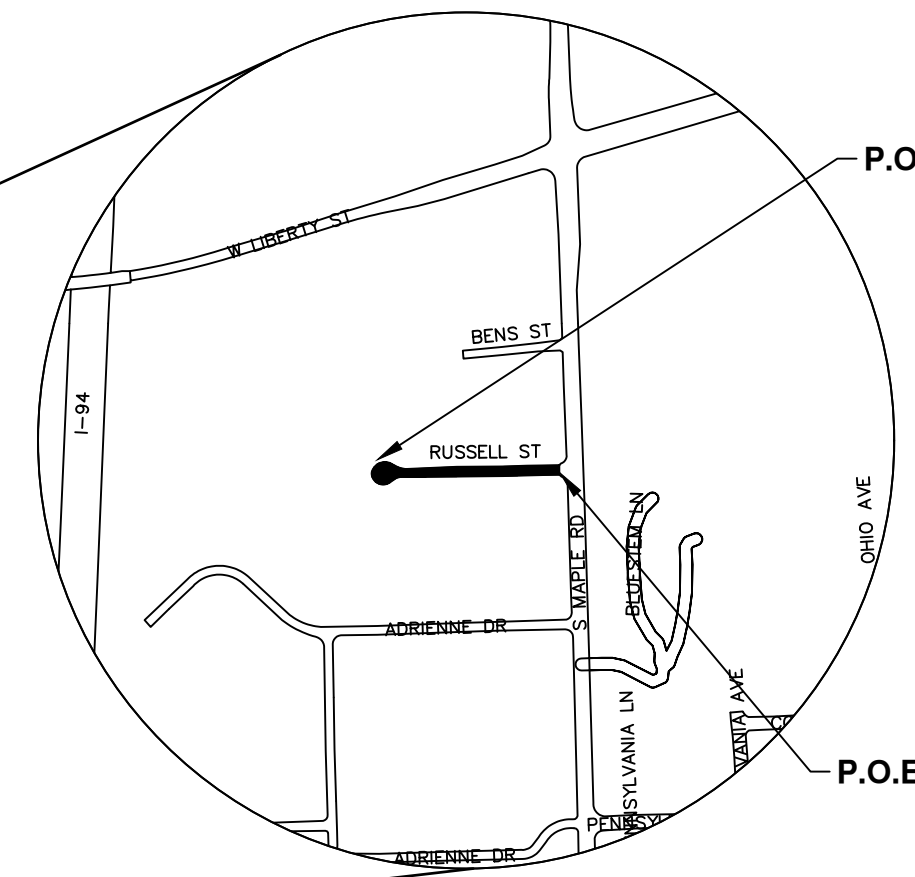
THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

Sheet Number	Sheet Title
1	COVER
2	NOTES
3	LEGEND
4	SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
5	EXISTING AND PROPOSED TYPICALS
6	EXISTING AND PROPOSED TYPICALS
7	DETAILS 1
8	DETAILS 2
9	ALIGNMENT AND EASEMENT PLAN
10	REMOVAL PLAN
11	PAVING PLAN
12	PAVING PROFILE
13	GRADING PLAN
14	DETAIL GRADES - SIDEWALKS
15	ADA RAMPS
16	UTILITY PLAN
17	PROPOSED CATCH BASIN PROFILES
18	LANDSCAPE PLAN
19	LANDSCAPE NOTES & DETAILS
20	MDOT TRAFFIC DETAILS
21	PEDESTRIAN DETOUR ROUTE
22	SIGNAGE AND PAVEMENT MARKING PLAN



VICINITY MAP



P.O.B

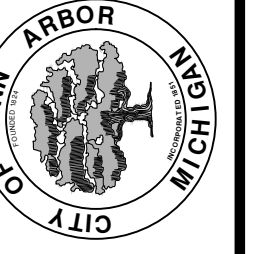
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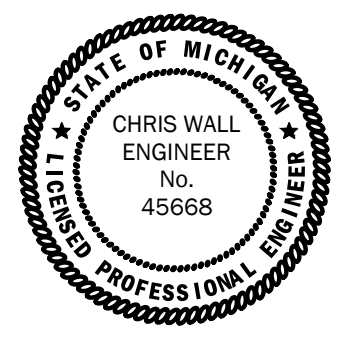
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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET PAVING AND STORM IMPROVEMENTS
TO S MAPLE ROAD
SCALE
DRAWING No. 2014000-1
SHEET No. 1 OF 22

PREPARED UNDER THE SUPERVISION OF
Chris Wall
CHRIS WALL, P.E. - MI LICENSE No. 45668
PROJECT MANAGER
DATE 05/16/2022



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CONSTRUCTION NOTES:

- Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
- The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
- The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
- During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".
- Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
- City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public Works.
- For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.
- The Contractor shall backfill trenches in accordance with Trench Detail specified on plans. This work shall be included in the item of work "Excavate and Backfill for Water Service Tap and Lead". All concrete removals and replacements required for this work will be paid for separately.
- All ductile iron pipe and fittings shall be polyethylene wrapped per ANSI/AWWA C105/A21.5.
- Cor-blu bolts to be used at all mechanical water main joints at hydrants and Megalug fittings
- The Contractor shall construct, flush, and bacteriologically test the water main per Detailed Specification "Water Main Installation and Testing" and as approved by the Engineer. All chlorinated water shall be discharged directly into an approved sanitary sewer. The Contractor shall supply all necessary hoses, fittings and the like to accomplish this work.
- Water main fittings, other than those specifically listed as separate pay items, which are required to complete the work, such as blow-off assemblies, concrete thrust blocks, solid sleeves and mechanical plugs, shall not be paid for separately, but shall be included in the pipe pay items.
- "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.
- Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
- All fittings, hydrants, valves and castings removed during construction are the property of the City of Ann Arbor. The Contractor within 48 hours shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
- Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions".
- All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
- The location of material stock piles and on-site staging areas to be approved by the Engineer.
- For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.
- All structures shall receive new castings as directed by the Engineer, as specified on the standard casting schedule. The existing castings are the property of the City of Ann Arbor. The Contractor shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
- Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
- Where sewer pipes of different sizes or materials are joined, Fernco flexible couplings with stainless steel shear rings shall be used. The Contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.
- Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail detailed in the specifications or shown on Plans. Backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.
- Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified Russell Street"
- In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2' below top of proposed pavement.

29. WHERE PROPOSED CONCRETE PAVEMENT IS ADJACENT TO EXISTING CONCRETE PAVEMENT, CONTRACTOR WILL USE MECHANICAL ANCHOR AND HOOK BOLT PER DETAIL SD-R-5.

IMPERVIOUS PROJECT AREA	
PRIOR TO CONSTRUCTION 4100 sf2 = 0.094 ACRES	POST CONSTRUCTION 22,000 sf2 = 0.505 ACRES

TOTAL AREA OF PROPOSED DISTURBANCE = 1.19 AC 1.19 AC - RUSSELL ST
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PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
* NO COST TO CONTRACTOR	

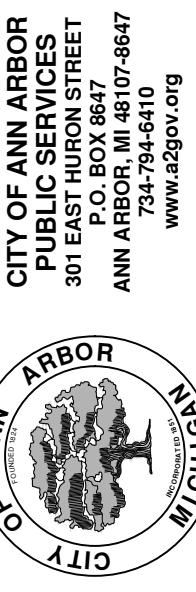
CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER (DAN WOODEN)	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
SANITARY (TRAVIS CONLEY)		
STORM (KEVIN SCHNEIDER)		
FORESTRY (MATT WALDSMITH)		
SIGNS SIGNALS STREET LIGHTS (MARC MERENO)		(734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818 DARRYL ELLINGTON (313) 995-6078 ZACH WHITE (313) 405-6024
GAS	CONSUMERS ENERGY 1000 GRAND OAKS DR. HOWELL, MI 48843	BOB MCLACHLAN (517) 242-7878
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4112 JAKE HERMANN (313) 235-5820
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300 STEVE RUDZINSKI (248) 359-6544
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	JEFF LEHMAN SR (734) 996-5334 TOYA TROUPE (734) 996-2167
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDBEN ROAD, SUITE B FLINT, MI	GREG SERICH (810) 244-3500
FIBER OPTIC	LUMEN 19675 W 10 MILE ROAD SOUTHFIELD, MI 48075	DAVE HUCKFELDT (517) 812-2592
FIBER OPTIC	FIBERLINK, INC PO BOX 701 LAPEER, MI 48446	JOEL JARVIS (810) 667-1470 TINA SNOBLEN (810) 667-2891 EXT 307 BILL GEE (810) 667-1470
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188
	UNIVERSITY OF MICHIGAN 1201 KIPKE DRIVE, ROOM 1080 ANN ARBOR, MI 48109	TERRY RAMSEY (734) 647-2031

PROJECT NAME BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	974.190	TOP OF HYDRANT, WEST END OF RUSSELL, NORTH SIDE
2	974.950	NORTH BOLT HYDRANT AT NORTHWEST CORNER OF RUSSELL & MAPLE




Know what's below.
Call before you dig.



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS

NOTES

SCALE: NTS



DRAWING No. 2014000-2

SHEET No. 2 OF 22


EXISTING LEGEND

- FIRE HYDRANT
- GATE VALVE IN BOX
- GATE VALVE IN WELL
- STOP BOX
- WATER VAULT
- WELL
- CATCH BASIN (SQ)
- CATCH BASIN (RD)
- STORM MANHOLE
- NON-CURB CATCH BASIN (SQ)
- END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- POST
- PEDESTRIAN SIGNAL
- SIGN
- HAND HOLE
- ORNAMENTAL LIGHT
- FLOOD LIGHT
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- GAS VALVE
- GAS VENT
- GAS BOX
- ELECTRICAL RISER
- TRANSFORMER
- UTILITY POLE
- LAMP POLE
- GUY ANCHOR
- GUY POLE
- MONITORING WELL
- MAILBOX
- SOIL BORING
- TRAVERSE POINT
- BENCH MARK
- IRON PIPE
- MON BOX

- WATER MAIN
- WATER MAIN ABANDONED
- STORM SEWER
- STORM SEWER ABANDONED
- SANITARY SEWER
- SANITARY SEWER ABANDONED
- GAS MAIN
- GAS MAIN (DEAD)
- ELECTRICAL OVER HEAD
- ELECTRICAL UNDER GROUND
- ELECTRICAL DUCT BANK
- TELEPHONE OVER HEAD
- TELEPHONE UNDER GROUND
- TELEPHONE DUCT BANK
- CABLE TV OVER HEAD
- CABLE TV UNDER GROUND
- FIBER OPTIC
- FIBER OPTIC DUCT BANK
- BOUNDARY
- BUILDING
- CENTERLINE OF DITCH
- CENTERLINE/CROWN OF ROAD
- CONTOUR MAJOR
- CONTOUR MINOR
- EDGE OF WATER
- FLOODPLAIN
- FENCE
- GRAVEL
- GUARDRAIL
- STONE WALL
- R.O.W.
- TREELINE
- WETLAND
- EDGE OF BRUSH
- HEDGE
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- SHRUB (DECIDUOUS)
- STUMP
- TREE TO REMAIN & PROTECT (DECIDUOUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10
- TREE TO REMAIN & PROTECT (CONIFEROUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10

PROPOSED LEGEND

- HYDRANT (PLAN)
- WATER GATE WELL
- REDUCER
- WATER GATE VALVE
- WATER STOP BOX
- WATER VAULT
- INLET
- DOUBLE INLET
- INLET JUNCTION CHAMBER
- ROUND CATCH BASIN
- STORM MANHOLE
- DRAIN ARROW
- FLARED END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- SIGN
- PUSH BUTTON
- HAND HOLE
- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- FIBER OPTIC
- ELECTRICAL
- CENTERLINE OF DITCH
- CENTERLINE OF ROAD
- FENCE
- GRAVEL
- SILT FENCE
- PROTECTIVE FENCE
- GUARDRAIL
- LOT/UNIT
- CURB
- TEMPORARY GRADING PERMIT
- CONTOUR MAJOR
- CONTOUR MINOR
- WATER EASMENT
- STORM EASEMENT
- SANITARY EASEMENT
- R.O.W.
- LIMITS OF CONSTRUCTION
- LIMIT OF GRADING
- STONE WALL
- DETECTABLE WARNING
- ASPHALT
- CONCRETE
- SIDEWALK
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- TREE TO BE REMOVED (DECIDUOUS)
- TREE TO BE REMOVED (CONIFEROUS)
- STUMP TO BE REMOVED

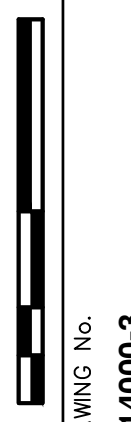


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RUSSELL STREET IMPROVEMENTS

LEGEND

SCALE: NTS



DRAWING No. 2014000-3

3 OF 22

REV.	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR PUBLIC SERVICES
 301 EAST HURON STREET
 P.O. BOX 864
 ANN ARBOR, MI 48107-0864
 ANN ARBOR 734.794.6410
 www.a2gov.org

GENERAL
NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CITY ORDINANCE CHAPTER 63, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE 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 CITY OF ANN ARBOR.
4. 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, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. 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.

8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL 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 AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

- 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.

- 1.3. INSTALL WATER MAINS, STORM SEWERS. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.7. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.8. CLEAN OUT STORM SEWER SYSTEMS.
- 1.9. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.10. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

TEMPORARY SEEDING:

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

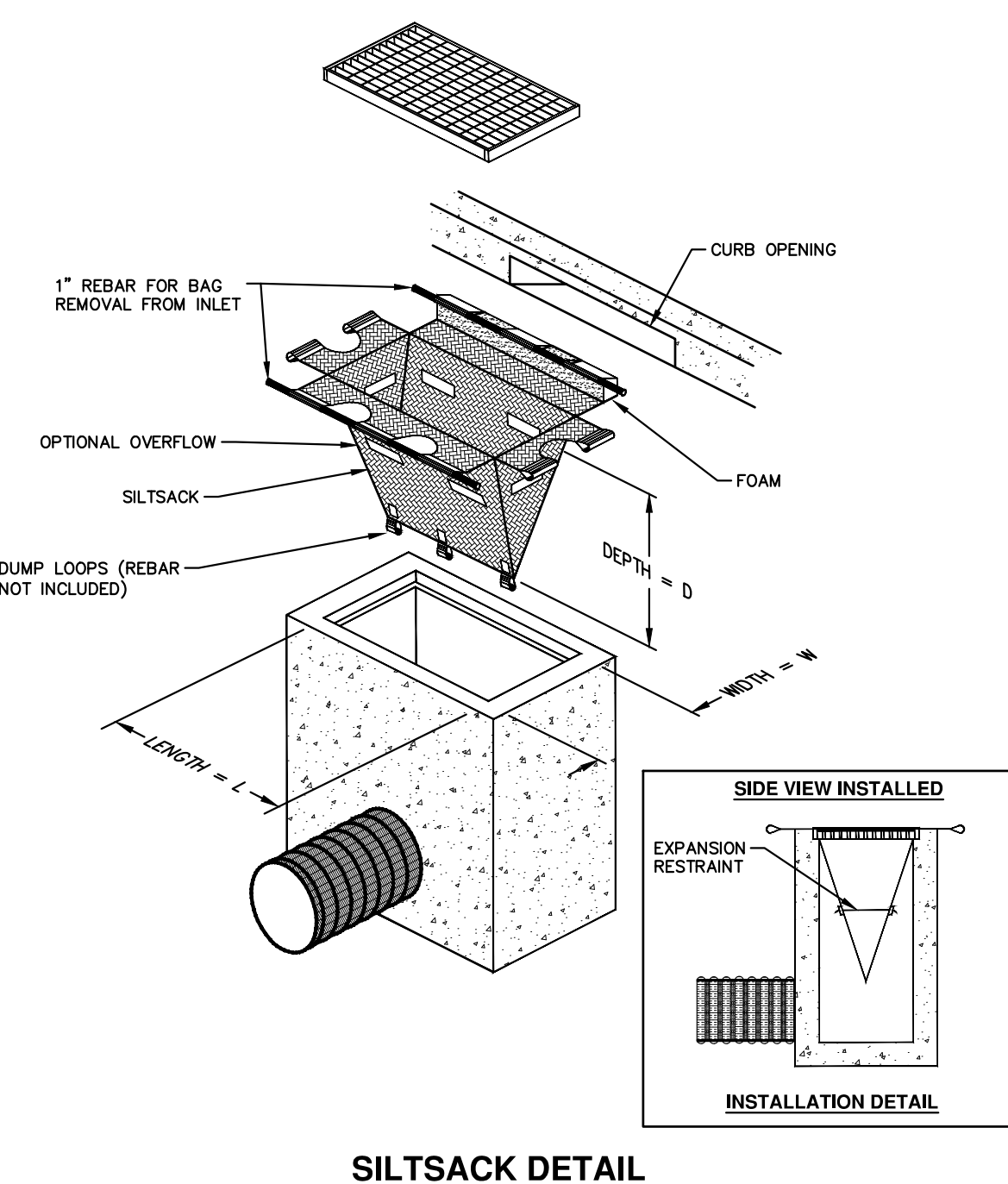
THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$33,000

ESTIMATE OF EXCAVATION AND FILL FROM EXISTING TO FINAL GRADE:
EXCAVATION = 81 CY, FILL = 245 CY

- ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:
- Sb - SEBEWA LOAM - IN DEPRESSION AREAS, BROAD LOW-LYING AREA, AND DRAINAGEWAYS OF OUTWASH PLAINS, VALLEY TRAINS, AND TERRACES. SLOPE IS 0% TO 2%.
 - FoB - FOX SANDY LOAM - IN UPLAND AREAS AND ON OUT WASH PLAINS, KAMES, VALLEY TRAINS, TERRACES, AND MORAINES. SLOPES ARE UNIFORM OR SHORT AND COMPLEX.
 - MdA - MATHERTON SANDY LOAM - IN DEPRESSION AREAS, BROAD LOW-LYING AREAS, AND ALONG DRAINAGEWAYS, OUTWASH PLAINS, VALLEY TRAINS, AND TERRACES. NEARLY LEVEL TO GENTLY SLOPING.
 - MfA - METAMORA SANDY LOAM - IN DEPRESSION AREAS, BROAD, LOW-LYING AREAS, AND ALONG DRAINAGEWAYS OF TILL PLAINS AND MORAINES.
 - NaB - NAPPANEE SILTY CLAY LOAM - ON FOOT SLOPES AND ALONG DRAINAGEWAYS OF TILL PLAINS, MORAINES, AND LAKE PLAINS. NEARLY LEVEL TO GENTLY SLOPING.

IMPERVIOUS PROJECT AREA
500 ft² - WALK = 0.011 AC
3000 ft² - DRIVE = 0.069 AC
18,500 ft² - ROAD = 0.425 AC

TOTAL AREA OF PROPOSED DISTURBANCE = 1.19 AC
1.19 AC - RUSSELL ST



NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK

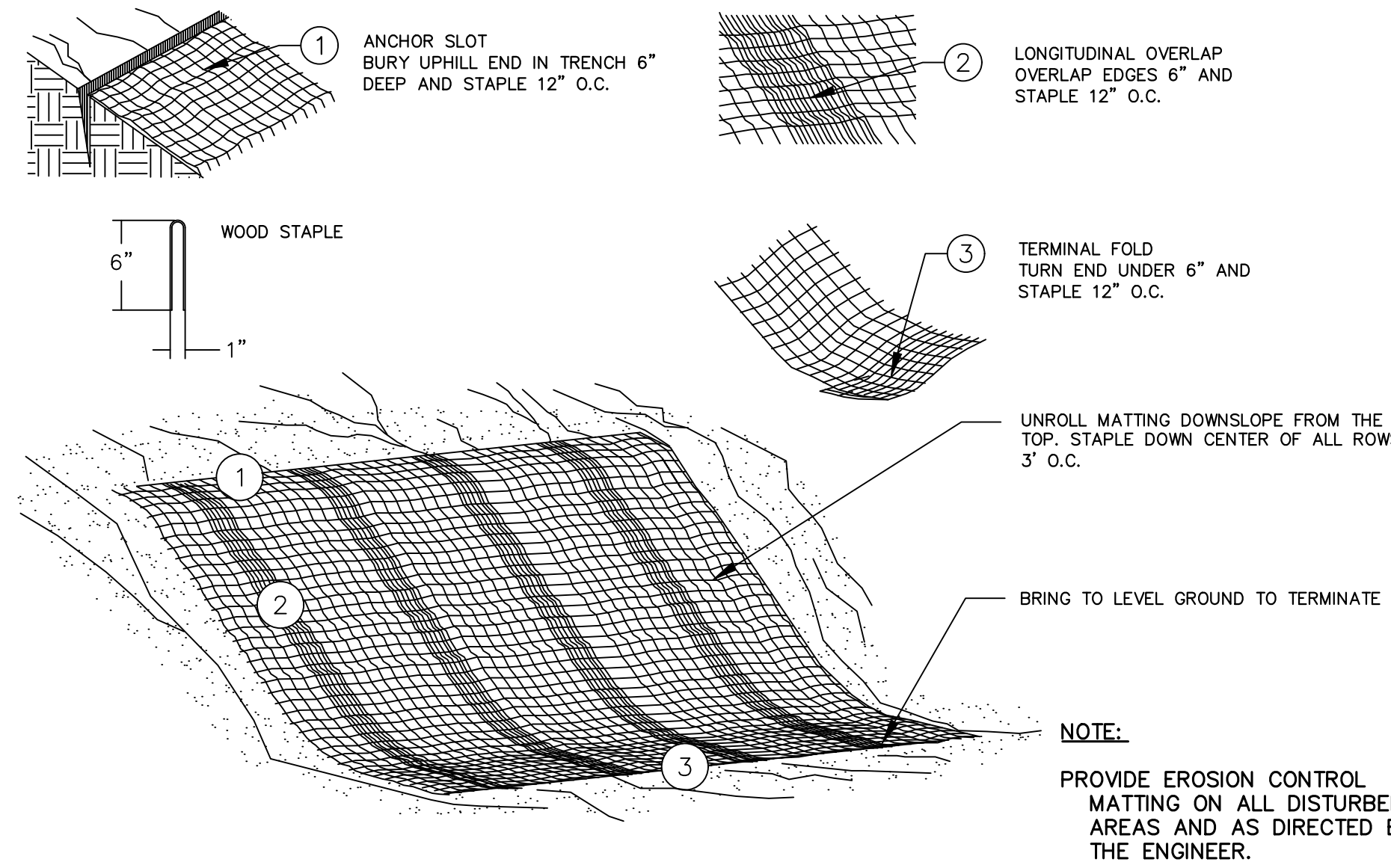
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK

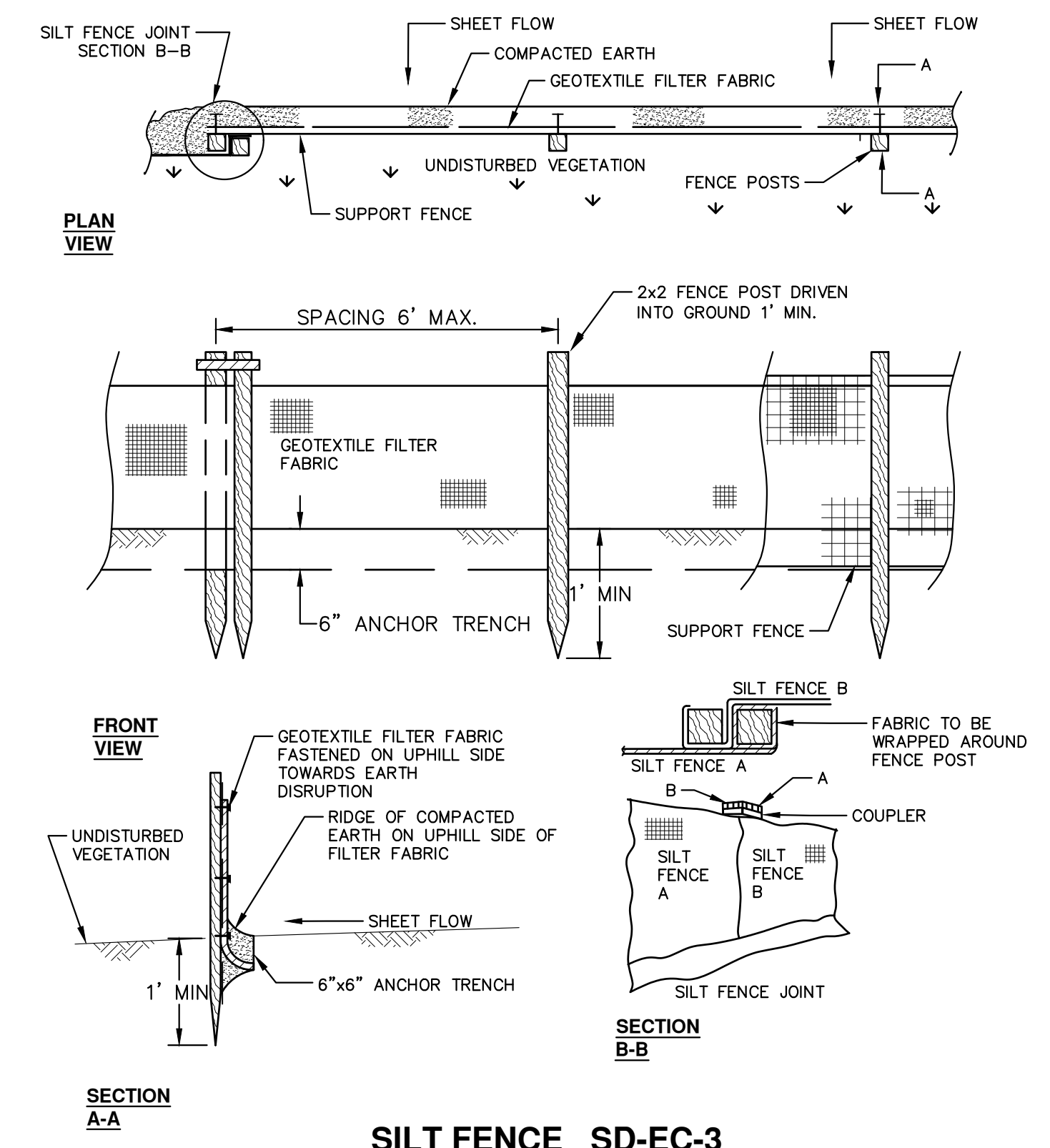
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



MULCH BLANKET DETAIL

APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.



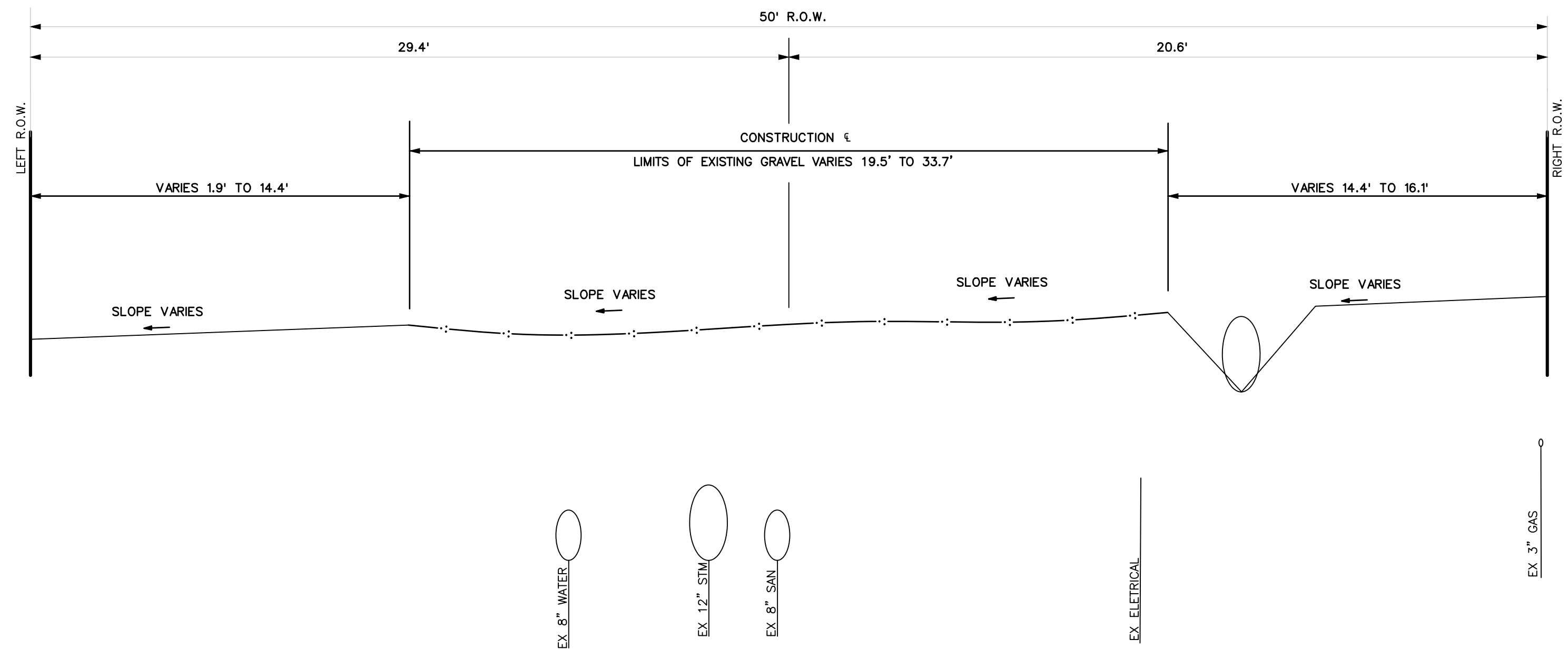
SILT FENCE SD-EC-3

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS
 SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

SCALE: NTS
 DRAWING No. 2014000-4
 SHEET No. 4 OF 22

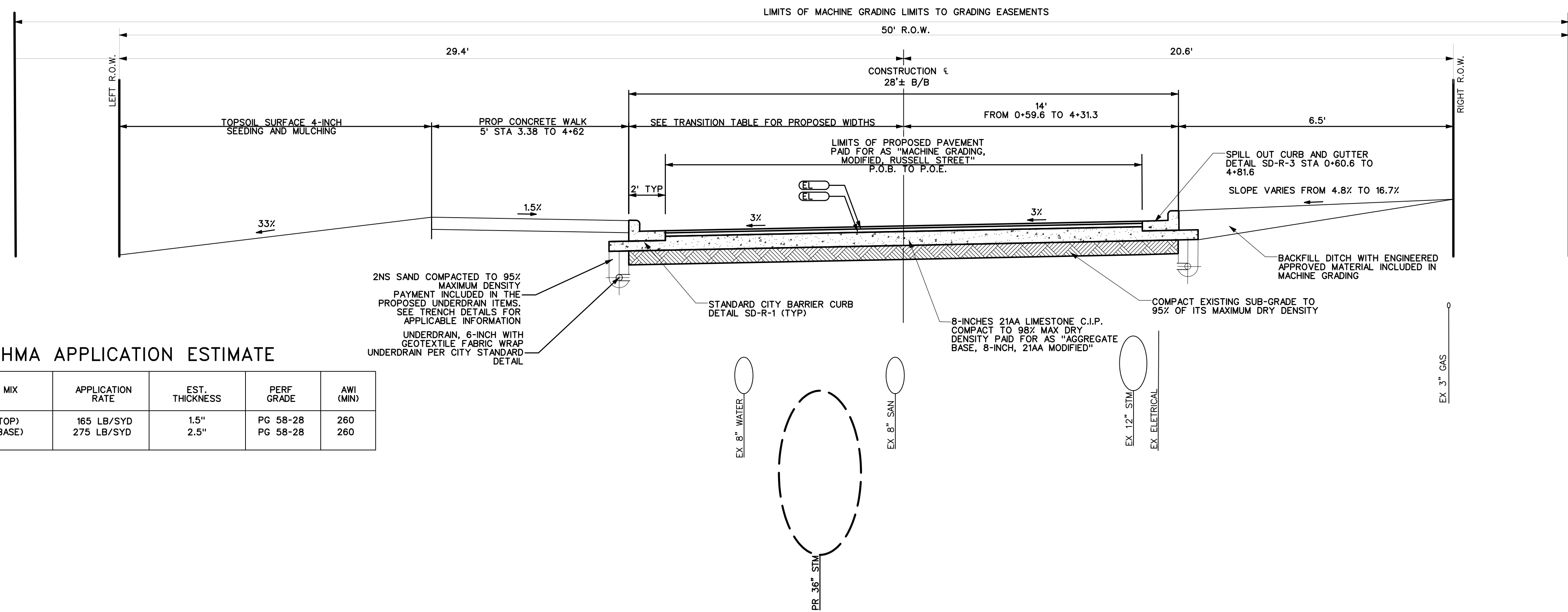
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EXISTING TYPICAL CROSS SECTION
RUSSELL STREET

TRANSITION TABLE

FROM STATION	FROM DISTANCE	TO STATION	TO DISTANCE
0+63.32	14'	0+83.26	23'
0+83.26	23'	1+42.29	23'
1+42.29	23'	1+61.63	14'
1+61.63	14'	1+69.06	14'
1+69.06	14'	1+87.87	23'
1+87.87	23'	3+27.79	23'
3+27.79	23'	3+47.21	14'
3+47.21	14'	4+93.95	14'



PROPOSED TYPICAL CROSS SECTION
RUSSELL STREET

STA 0+60.62 TO STA 0+63.32
STA 1+61.63 TO STA 1+69.06
STA 3+47.21 TO STA 4+93.95
NOT TO SCALE

HMA APPLICATION ESTIMATE

STREET NAME	PAY ITEM	HMA MIX	APPLICATION RATE	EST. THICKNESS	PERF GRADE	AWI (MIN)
RUSSELL ST	HMA, EL	EL (TOP)	165 LB/SYD	1.5"	PG 58-28	260
	HMA, EL	EL (BASE)	275 LB/SYD	2.5"	PG 58-28	260



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS

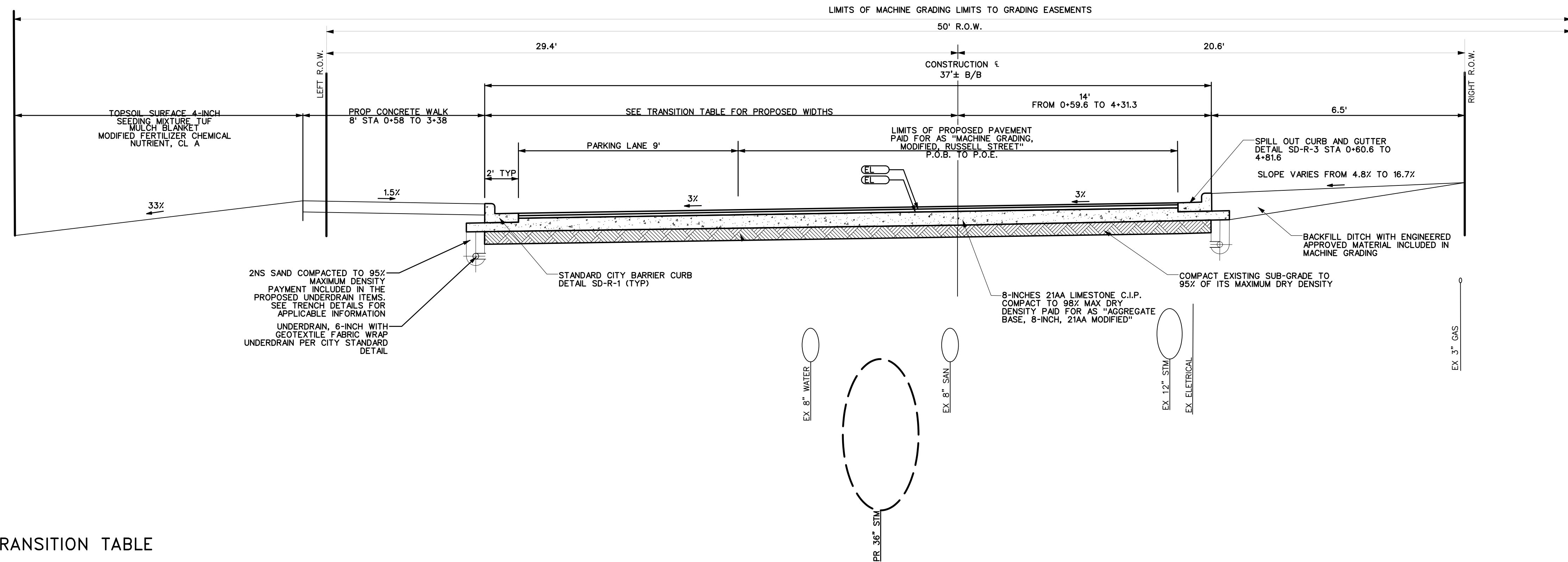
EXISTING AND PROPOSED TYPICALS

SCALE PLAN: #####
DRAWING No. 2014000-5

SHEET No.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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TRANSITION TABLE

FROM STATION	FROM DISTANCE	TO STATION	TO DISTANCE
0+63.32	14'	0+83.26	23'
0+83.26	23'	1+42.29	23'
1+42.29	23'	1+61.63	14'
1+61.63	14'	1+69.06	14'
1+69.06	14'	1+87.87	23'
1+87.87	23'	3+27.79	23'
3+27.79	23'	3+47.21	14'
3+47.21	14'	4+93.95	14'

HMA APPLICATION ESTIMATE

STREET NAME	PAY ITEM	HMA MIX	APPLICATION RATE	EST. THICKNESS	PERF GRADE	AWI (MIN)
RUSSELL ST	HMA, EL	EL (TOP)	165 LB/SYD	1.5"	PG 58-28	260
	HMA, EL	EL (BASE)	275 LB/SYD	2.5"	PG 58-28	260

PROPOSED TYPICAL CROSS SECTION
RUSSELL STREET
STA 0+63.32 TO STA 1+61.63
STA 1+69.06 TO STA 3+47.21
NOT TO SCALE

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RUSSELL STREET IMPROVEMENTS

SCALE PLAN: #####

DRAWING No. 2014000-6

SHEET No. 6 OF 22

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EXISTING AND PROPOSED TYPICALS

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UTILITY TRENCH-TYPE I SD-TD-1A
(UNDER BITUMINOUS PAVEMENT EXCL. SANITARY SEWER & EDGE DRAIN)

NOTES:

1. ALL TRENCH EXCAVATION, BEDDING, BACKFILLING, AND SURFACE RESTORATION SHALL COMPLY WITH CITY OF ANN ARBOR STANDARDS, ARTICLE 11.
2. TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.
3. ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. AND CITY STANDARDS
4. PIPE BEDDING THICKNESS UNDER CONCRETE PIPE 66" OR LARGER SHALL BE INCREASED TO 6".
5. SEE SD-TD-1B FOR SANITARY PIPE BEDDING AREA DETAIL. SEE SD-TD-11 FOR EDGE DRAIN BEDDING AND BACKFILL DETAILS.

REV. NO.	DATE	DRAWN BY	CHECKED BY
UTILITY TRENCH - TYPE I			
DR. DF	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-TD-1A	

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UTILITY TRENCH-TYPE VI SD-TD-6
(IN GREENBELT AREA REQUIRING CLASS II BACKFILL)

NOTES:

1. ALL TRENCH EXCAVATION, BEDDING, BACKFILLING, AND SURFACE RESTORATION SHALL COMPLY WITH CITY OF ANN ARBOR STANDARDS, ARTICLE 11.
2. TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.
3. ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. AND CITY STANDARDS
4. PIPE BEDDING THICKNESS UNDER CONCRETE PIPE 66" OR LARGER SHALL BE INCREASED TO 6".
5. SEE SD-TD-1B FOR SANITARY PIPE BEDDING AREA DETAIL.

REV. NO.	DATE	DRAWN BY	CHECKED BY
UTILITY TRENCH - TYPE VI			
DR. DF	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-TD-6	

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STORM MANHOLE SD-ST-1

PIPE SIZE	MIN. DIA.
<36"	4'
36"-42"	5'
48"-54"	6'

NOTES:

1. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 UNLESS APPROVED BY PSAA FOR SHALLOW APPLICATION.
2. ALL MANHOLES MUST HAVE ECCENTRIC CONES.
3. ALL JOINTS SHALL CONFORM TO ASTM C443.
4. MINIMUM MANHOLE DIAMETER SHOWN IN TABLE 1 SHALL BE INCREASED AS NEEDED BASED ON NUMBER OF PIPES AND ANGLE BETWEEN PIPES WITH 12" MIN. BETWEEN OPENINGS.

REV. NO.	DATE	DRAWN BY	CHECKED BY
STORM MANHOLE			
DR. DF	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-ST-1	

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FIRE HYDRANT ASSEMBLY SD-W-1

NOTES:

1. ALL D.I.P. PIPE, FITTINGS, AND HYDRANT BARREL TO BE POLYWRAPPED PER AWWA C105.
2. ALL HYDRANTS SHALL HAVE ONE 5" STORZ CONNECTION AND ONE 3 3/8" THREADED PUMPER CONNECTION.

REV. NO.	DATE	DRAWN BY	CHECKED BY
FIRE HYDRANT ASSEMBLY			
DR. DF	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/06/92	DRAWING NO. SD-W-1	

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TYPE L DRIVE APPROACH FOR STREETS WITH MOUNTABLE CURB SD-R-7

NOTE:

1. MINIMUM REQUIREMENT FOR DRIVE APPROACH TO BE MDOT P1 CONCRETE.
2. R (RADIUS) AND W1 (OPENING WIDTH) AND W2 (CURB CUT WIDTH) AS REQUIRED PER TABLE A, ARTICLE 6 OF CITY STANDARDS
3. IF GUTTER IS OVERLAP, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING CONCRETE GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

REV. NO.	DATE	DRAWN BY	CHECKED BY
TYPE L DRIVE APPROACH FOR STREETS WITH MOUNTABLE CURB			
DR. DF/DCO	CH. CSS/DF	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-R-7	

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TREE PLANTING

DO NOT PRUNE TERMINAL LEADER OR BRANCH TIPS.

PRUNE AWAY DEAD OR BROKEN BRANCHES ONLY.

REMOVE ALL LABELS, TAGS, TREE WRAP, TAPE OR STRING FROM TREE TRUNK AND CROWN.

PRUNE OFF SUCKERS.

EXCAVATE HOLE TO TWO TO THREE TIMES THE WIDTH OF ROOTBALL.

BREAK UP (SCARIFY) SIDES OF PLANTING HOLE. COMPACT SOIL AT BOTTOM OF HOLE TO CREATE A TREE PEDESTAL AS SHOWN.

BEFORE SETTING TREE IN HOLE, EXPOSE THE TRUNK FLARE BY REMOVING BURLAP AROUND TRUNK AND PULLING BACK SOIL.

SET AND CENTER ROOTBALL SO THAT TRUNK FLARE IS LEVEL TO GRADE OR VERY SLIGHTLY HIGHER IN CLAY SOIL.

WITHOUT DISTURBING DEVELOPED ROOTS, FOLD DOWN AND REMOVE ONE-THIRD TO ONE-HALF OF BURLAP TO EXPOSE ROOTBALL.

REMOVE AND DISPOSE OF ALL NON-BIODEGRADABLE MATERIALS. CUTTING AWAY WIRE BASKET TO 10" DEPTH. BACKFILL HOLE WITH EXCAVATED SOIL. TAMP DOWN SOIL TO REMOVE AIR POCKETS, AND FIRMLY SET TREE. DO NOT AMEND SOIL UNLESS PLANTING IN SEVERELY DISTURBED SOIL.

PLACE DOUBLE-SHREDDED HARDWOOD MULCH 2"-3" DEEP LEAVING A 3" RADIUS CIRCLE OF BARE SOIL AROUND TRUNK OF TREE.

DO NOT STAKE TREE UNLESS PERMITTED PER DETAIL SD-L-2.

NO UTILITIES SHALL BE PERMITTED IN OR UNDER THE PLANTING HOLE EXCEPT WHERE TREE TUNNELING IS PERMITTED PER SD-L-4.

MULCH

TREE SOIL PEDESTAL

HOLE WIDTH = 2-3x WIDTH OF ROOTBALL

REV. NO.	DATE	DRAWN BY	CHECKED BY
TREE PLANTING			
DR. DF/SMJ	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-L-1	

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TREE STAKING

TREE STAKING IS ONLY PERMITTED UNDER ONE OR MORE OF THE FOLLOWING CIRCUMSTANCES:

- 1) IN HEAVY CLAY SOIL
- 2) IN WINDY CONDITIONS
- 3) 3" OR GREATER DIAMETER TREE TRUNK
- 4) TREE WITH LARGE CROWN

IF STAKING IS NEEDED DUE TO THESE CONDITIONS:

- STAKE WITH 2 x 2 HARDWOOD STAKES, OR APPROVED EQUAL, DRIVEN 6"-8" OUTSIDE OF ROOTBALL.
- LOOSELY STAKE TREE TRUNK TO ALLOW FOR TRUNK FLEXING.
- STAKE TREES JUST BELOW FIRST BRANCH WITH 2"-3" WIDE BELT-LIKE NYLON OR PLASTIC STRAPS (2 PER TREE ON OPPOSITE SIDES OF TREE).
- CONNECT STRAPS FROM TREE TO STAKE HORIZONTALLY.
- DO NOT USE ROPE OR WIRE THROUGH A HOSE.
- REMOVE ALL STAKING MATERIALS AFTER 1 YEAR.

MULCH

TREE SOIL PEDESTAL

REV. NO.	DATE	DRAWN BY	CHECKED BY
TREE STAKING			
DR. DF/SMJ	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-L-2	

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SIDEWALK RETAINING WALL, 6 TO 24 INCH

SLOPE RESTORATION, TYP.

EXISTING GRADE SLOPE VARIES 1:3 MAX

2NS SAND

#4 REBAR 12" O.C., CONT. TYP. 5' CLR. MIN. FROM EDGE OF CONCRETE WALL.

1 1/2" WASHED #A AGGREGATE W/ FILTER FABRIC 2' OF 1" EACH WEEP HOLE.

1 1/2" DIA. WEEP HOLE @ 5'-0" O.C.

3/4" CHAMFER BOTH SIZES

HEIGHT VARIES 1'-6" MAX.

VARIES

VARIES

COMPACT EXISTING SUBGRADE TO 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY. COMPACT SUBGRADE AS APPROVED BY THE ENGINEER.

GRANULAR MATERIAL CLASS II (TYP.)

REV. NO.	DATE	DRAWN BY	CHECKED BY
TREE STAKING			
DR. DF/SMJ	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 11/6/92	DRAWING NO. SD-L-2	

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS

SCALE PLAN: #####

DRAWING NO. 2014000-7

SHEET No. 7 OF 22

DETAILS 1

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REVISÉD
1-24-19

EJ PRODUCT #001040326

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REV. NO.	DATE	DRAWN BY	CHECKED BY
SANITARY MANHOLE COVER			
1040A			
DR. ARG	CH. CEC	DRAWING NO.	
SCALE N.T.S.	DATE 1/24/19	SAN-MH	

REVISÉD
1-24-19

EJ PRODUCT #001040325

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REV. NO.	DATE	DRAWN BY	CHECKED BY
STORM MANHOLE COVER			
1040A			
DR. ARG	CH. CEC	DRAWING NO.	
SCALE N.T.S.	DATE 1/24/19	STM-MH	

REVISÉD
1-24-19

EJ PRODUCT #001040324

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REV. NO.	DATE	DRAWN BY	CHECKED BY
WATER MANHOLE COVER			
1040A			
DR. ARG	CH. CEC	DRAWING NO.	
SCALE N.T.S.	DATE 1/24/19	W-MH	

TYPE OF CASTING	MDOT DESIGNATION	EJ CASTING NO.	NEENAH CASTING NO.
MANHOLE AND GATE WELL FRAME AND COVER	Q	1040Z W/ TYPE A COVER*	R-1642 W/ TYPE C COVER*
BARRIER CURB INLET FRAME AND COVER	K	7045Z W/ TYPE M1 GRATE	R-3031-B W/ TYPE S GRATE
BARRIER CURB DOUBLE INLET FRAME AND COVER	K	7035Z W/ TYPE M2 GRATE	N/A
GUTTER INLET FRAME AND COVER	R	5080Z W/ TYPE 5000M2 GRATE	R-3448C, W/ TYPE S GRATE
GUTTER DOUBLE INLET FRAME AND COVER	R	7034Z W/ TYPE M GRATE	N/A
MOUNTABLE CURB INLET ASSEMBLY		7065	N/A
YARD DRAIN (BEE HIVE) FRAME AND COVER	G	1040Z, TYPE O2 GRATE	R-2560-E1
WATER VALVE BOX ASSEMBLY IN PAVEMENT		8560	N/A
MONUMENT BOX ASSEMBLY		8360	N/A

NOTES:
 *EACH COVER SHALL HAVE "SANITARY", "STORM", OR "WATER" CAST IN THE SURFACE, WHICHEVER IS APPLICABLE. SANITARY SEWER COVERS SHALL BE GASKETED IN FLOOD PRONE AREAS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PSAA. FRAMES AND COVERS MUST HAVE MACHINED BEARING SURFACES.

STANDARD CASTING SCHEDULE SD-GU-4

REVISÉD
6-22-21

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REV. NO.	DATE	DRAWN BY	CHECKED BY
STANDARD CASTING SCHEDULE			
SD-GU-4			
DR. JPB	CH. CSS	DRAWING NO.	
SCALE N.T.S.	DATE 06/12/92	SD-GU-4	



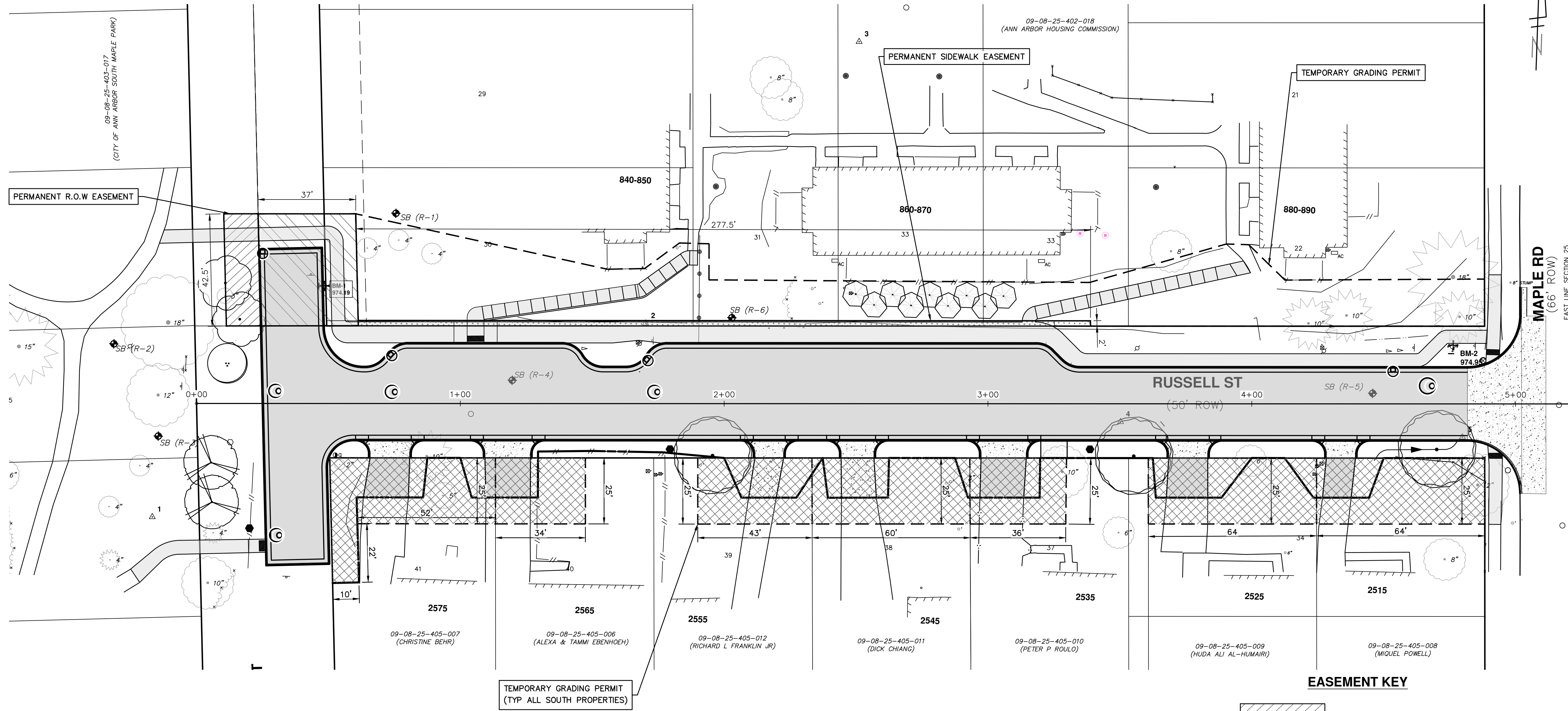
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RUSSELL STREET IMPROVEMENTS
 SCALE PLAN: #####
 DRAWING NO. 201-4000-8
 SHEET No. 8 OF 22

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EASEMENT KEY

-  PERMANENT ROW EASEMENT (PARKS PROPERTY)
-  PERMANENT ROW EASEMENT (AAHC PROPERTY)
-  TEMPORARY GRADING PERMIT
-  PERMANENT SIDEWALK EASEMENT

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RUSSELL STREET IMPROVEMENTS

ALIGNMENT AND EASEMENT PLAN

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING No. 2014000-9

SHEET No. 9 OF 22

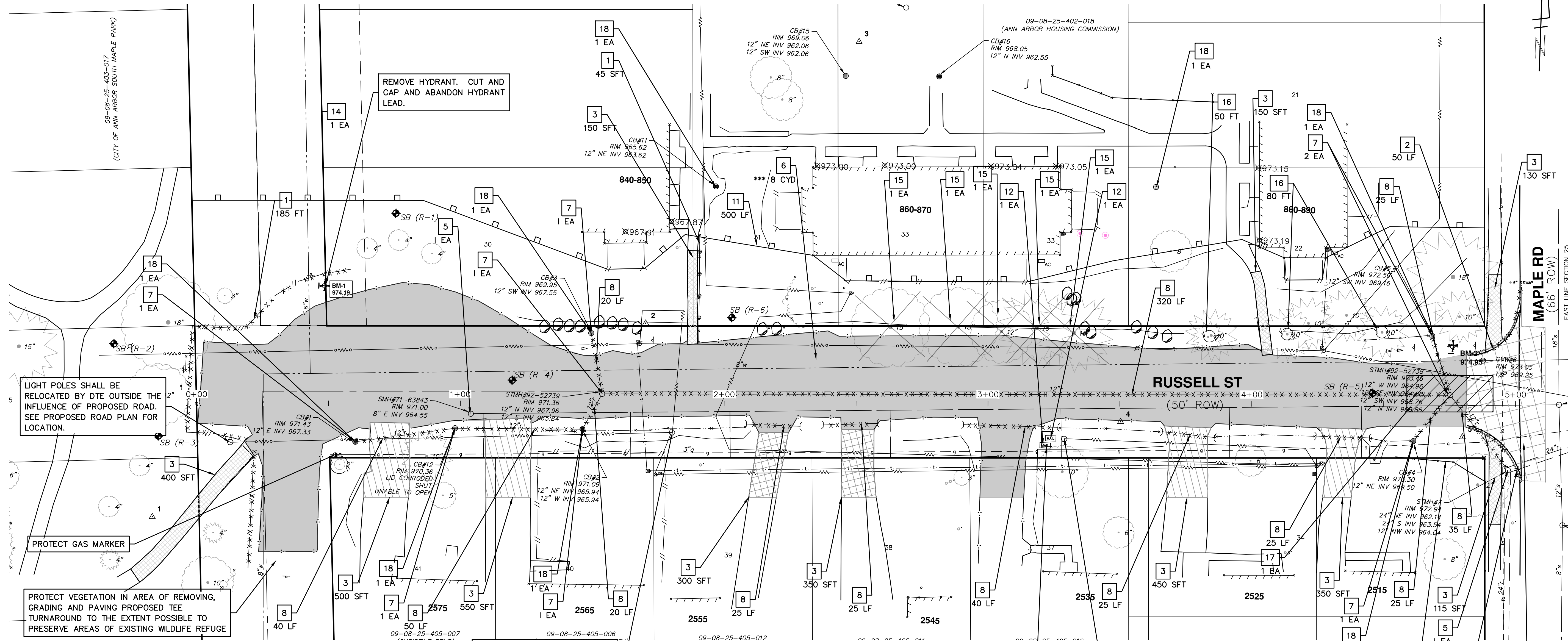
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CITY OF ANN ARBOR
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REMOVAL KEY	
KEY	DESCRIPTION
1	FENCE, REMOVE
2	CURB AND GUTTER, ANY TYPE OR SIZE, REMOVE*
3	SIDEWALK AND RAMPS, REMOVE* DRIVEWAY APPROACH, REMOVE*
5	ADJUST MONUMENT BOX, GATE VALVE BOX, OR STRUCTURE COVER
7	DR STRUCTURE, ANY SIZE OR DEPTH, REM

8	SEWER, ANY SIZE OR DEPTH, REM
11	EROSION CONTROL, SILT FENCE
12	RELOCATE MAILBOX
13	PAVEMENT, REMOVE, 8-INCH *
14	FIRE HYDRANT, REM
15	TREE, REM
16	TREE PROTECTION**
17	GRAVEL ENTRANCE/EXIT MAT
18	EROSION CONTROL, INLET FILTER

LIGHT POLES SHALL BE RELOCATED BY DTE OUTSIDE THE INFLUENCE OF PROPOSED ROAD. SEE PROPOSED ROAD PLAN FOR LOCATION.

RELOCATE CONCRETE PAD AND MAILBOX. SEE PROPOSED ROAD PLAN FOR LOCATION.

LIGHT POLES SHALL BE RELOCATED BY DTE OUTSIDE THE INFLUENCE OF PROPOSED ROAD. SEE PROPOSED ROAD PLAN FOR LOCATION.

PROTECT RETAINING WALL

*SAWCUT FULL DEPTH AT REMOVAL LIMITS
 **TREE REMOVALS PROVIDED FOR INFORMATION ONLY. ALL TREE REMOVALS WILL BE PERFORMED PRIOR TO MARCH 31ST, NOT AS A PART OF THIS PROJECT, BY THE CITY OF ANN ARBOR. CONTRACTOR TO REMOVE STUMPS. THIS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE COVERED UNDER THE ITEM "GENERAL CONDITIONS, MAX"
 *** EARTH EXCAVATION IN AREAS WHERE EXISTING GRAVEL ROAD EXTENDS BEYOND THE PROPOSED ROADWAY LIMITS INCLUDING THE PROPOSED SIDEWALK ADJACENT TO THE ROADWAY.

LEGEND	
	EXISTING AGGREGATE ROAD/DRIVE (REMOVAL PAID FOR AS PART OF MACHINE GRADING)
	BITUMINOUS DRIVEWAY APPROACH, REM
	CONCRETE DRIVEWAY APPROACH, REM
	PAV'T REMOVE (CONCRETE)
	SIDEWALK, REM
	CURB AND GUTTER, REM
	SEWER, REM
	TREE, REM
	SILT FENCE
	TREE PROTECTION FENCE

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RUSSELL STREET IMPROVEMENTS

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'

DRAWING No. **2014000-10**

SHEET No. **10 OF 22**

REMOVAL PLAN

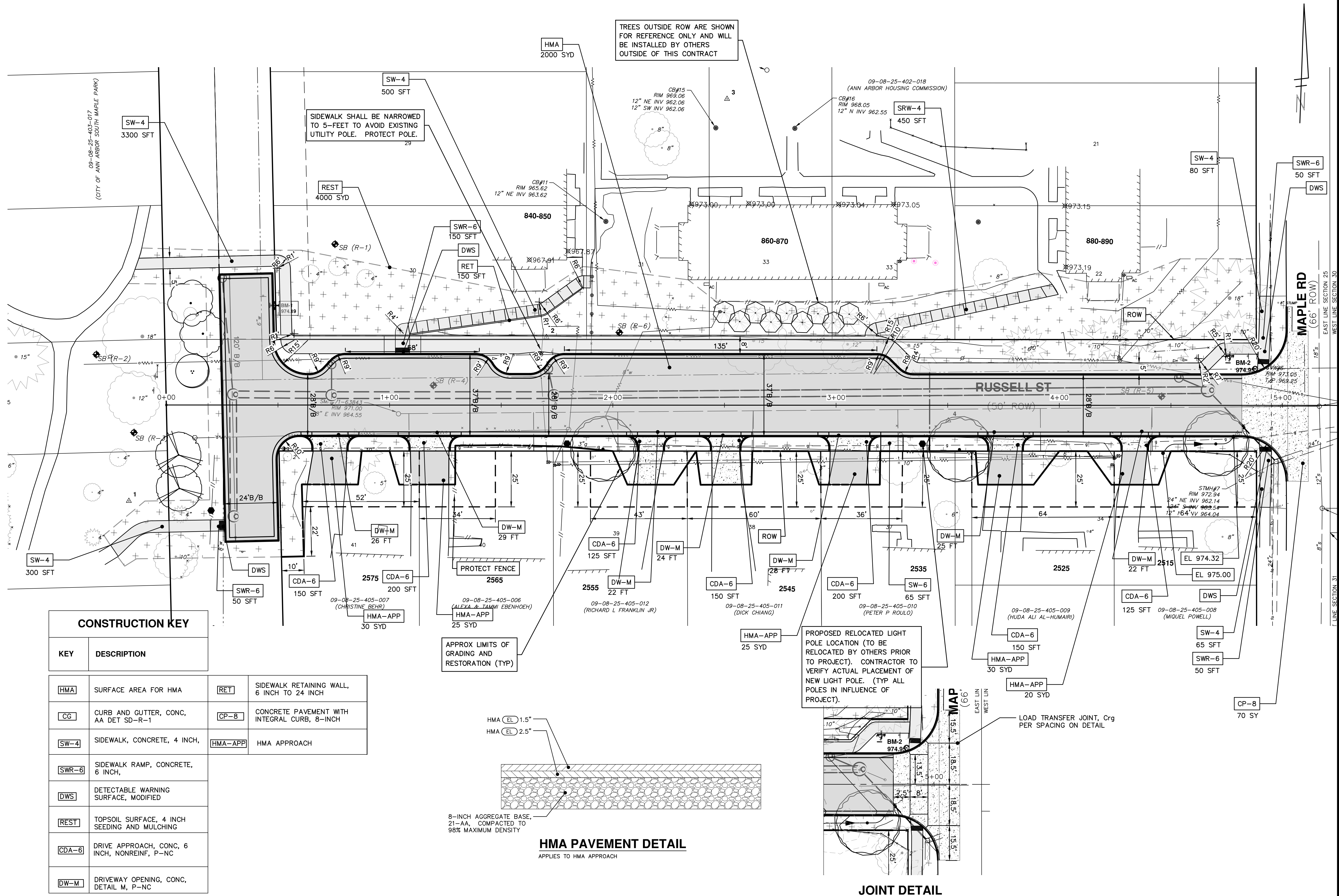
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REVISIONS:

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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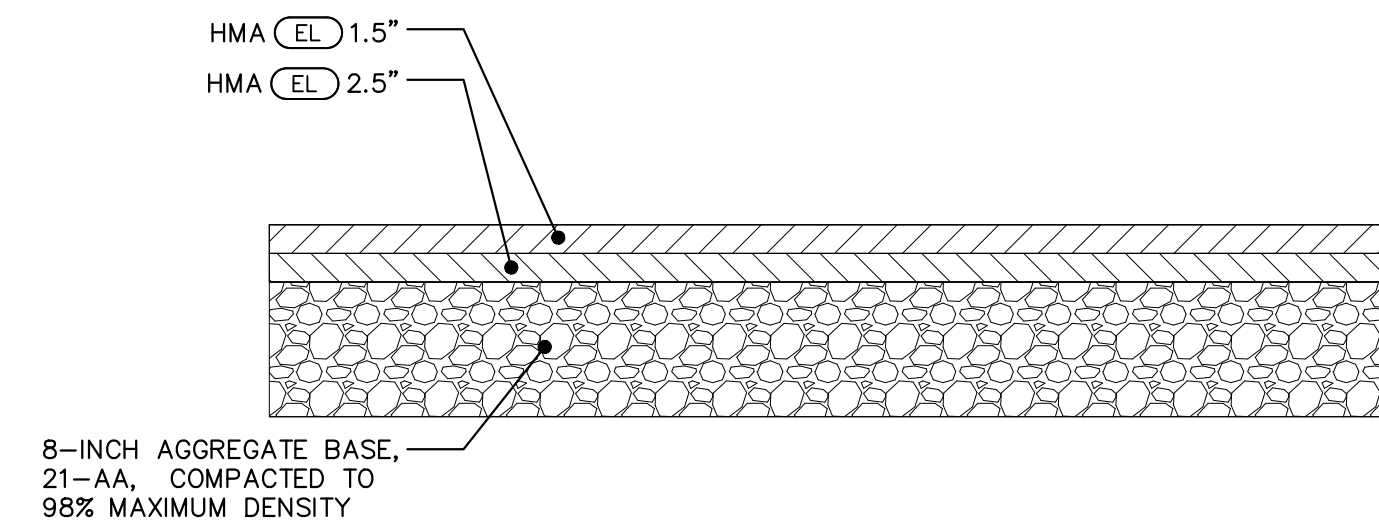
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CONSTRUCTION KEY

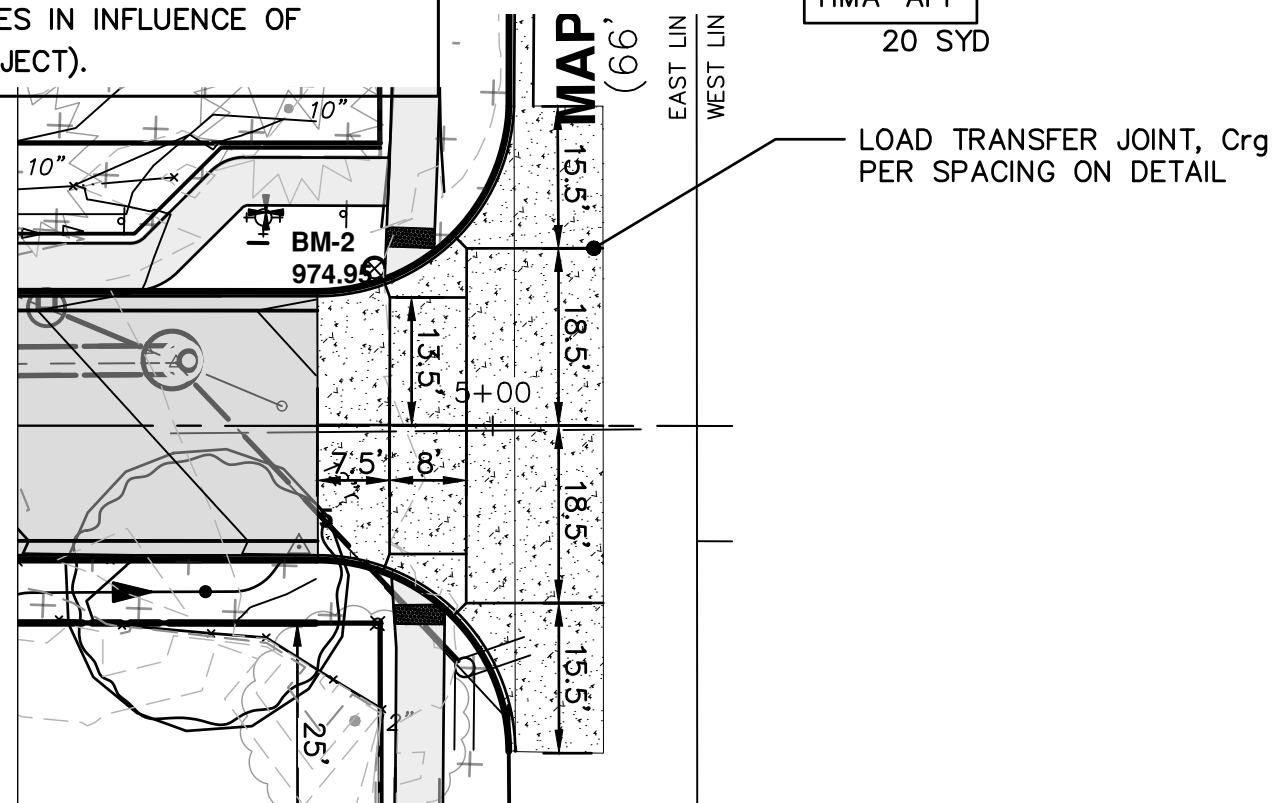
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CURB AND GUTTER, CONC, AA DET SD-R-1
SW-4	SIDEWALK, CONCRETE, 4 INCH,
SWR-6	SIDEWALK RAMP, CONCRETE, 6 INCH,
DWS	DETECTABLE WARNING SURFACE, MODIFIED
REST	TOPSOIL SURFACE, 4 INCH SEEDING AND MULCHING
CDA-6	DRIVE APPROACH, CONC, 6 INCH, NONREINF, P-NC
DW-M	DRIVEWAY OPENING, CONC, DETAIL M, P-NC
RET	SIDEWALK RETAINING WALL, 6 INCH TO 24 INCH
CP-8	CONCRETE PAVEMENT WITH INTEGRAL CURB, 8-INCH
HMA-APP	HMA APPROACH

APPROX LIMITS OF GRADING AND RESTORATION (TYP)



HMA PAVEMENT DETAIL
APPLIES TO HMA APPROACH

PROPOSED RELOCATED LIGHT POLE LOCATION (TO BE RELOCATED BY OTHERS PRIOR TO PROJECT). CONTRACTOR TO VERIFY ACTUAL PLACEMENT OF NEW LIGHT POLE. (TYP ALL POLES IN INFLUENCE OF PROJECT).



JOINT DETAIL

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SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

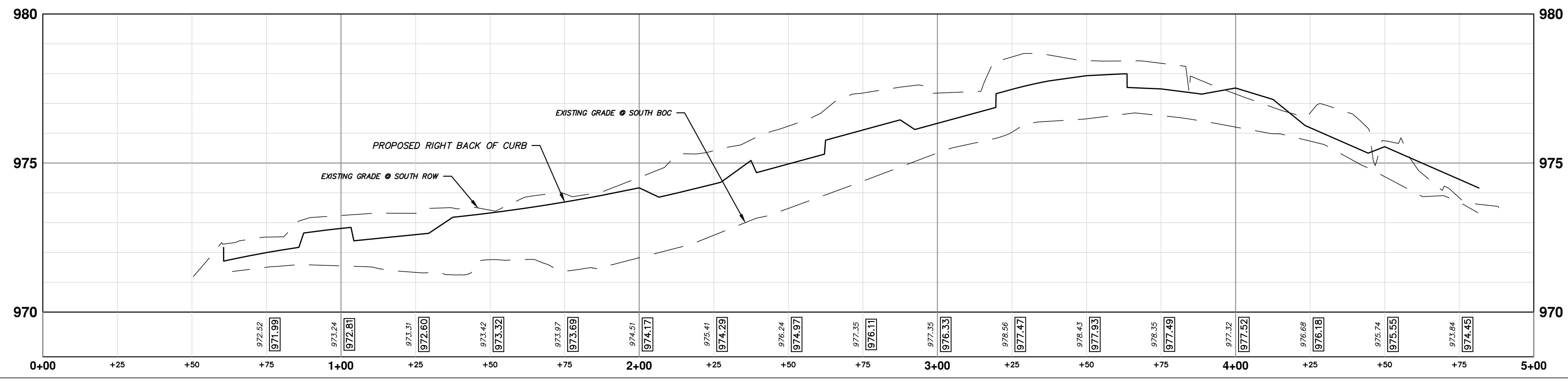
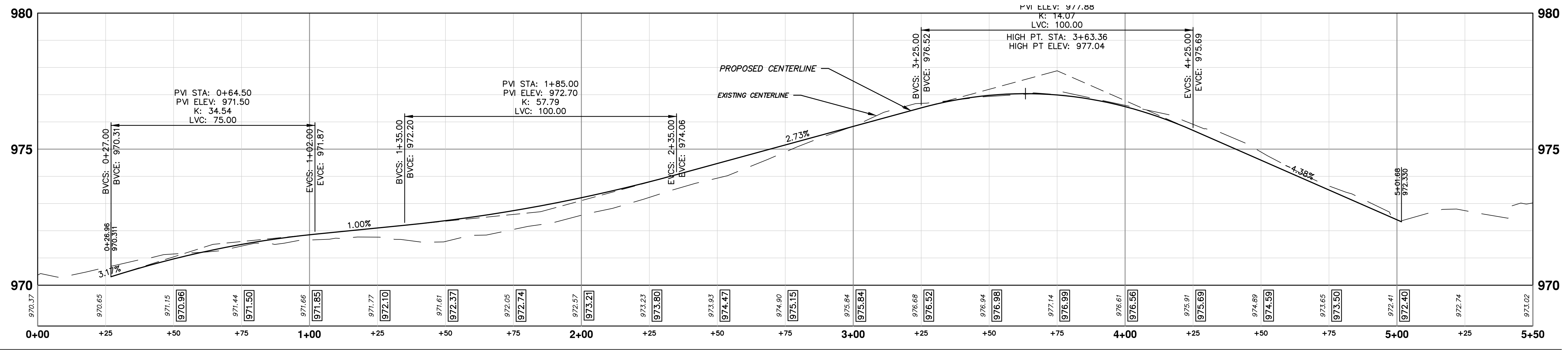
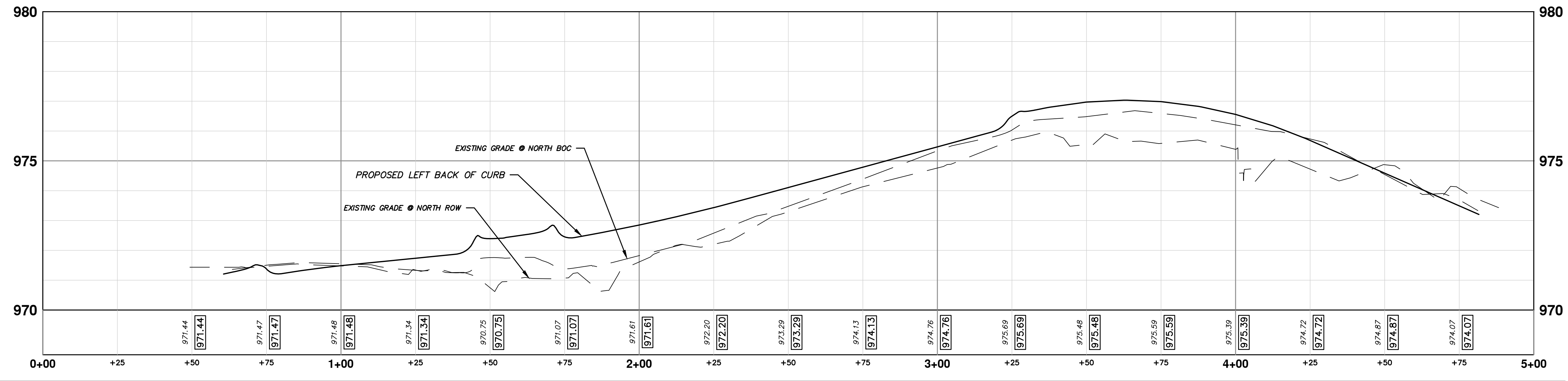
DRAWING NO. 2014000-11
SHEET NO. 11 OF 22

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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CITY OF ANN ARBOR
MICHIGAN

C:\pwork\mflnagon\41102116\CRD-PLTS-Proposed Road.dwg Dwg Created: 16-May-22 - _a2 standard bw.stb - Plot Date: 16-May-22



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

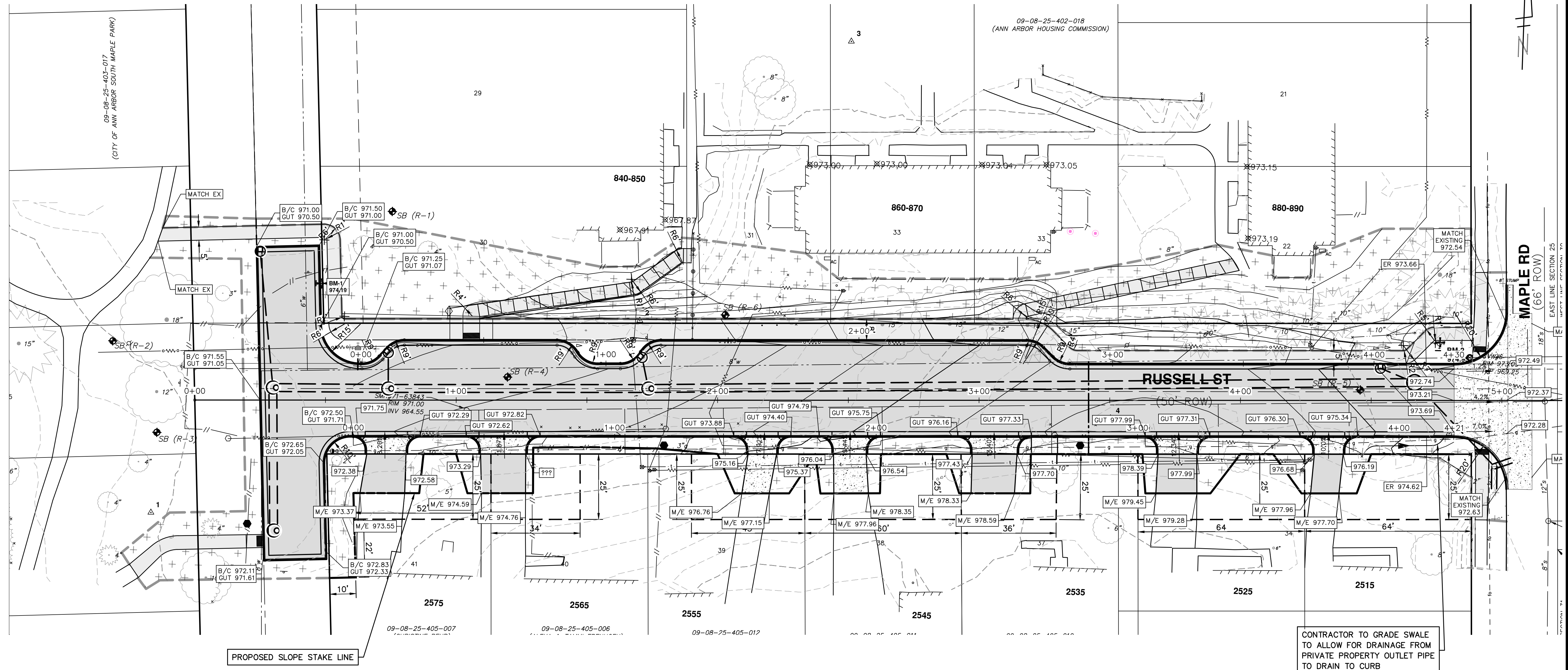
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 ANN ARBOR, MI 48106-1647
 ANN ARBOR: 734.784.4410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
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 PAVING PROFILE

SCALE PLAN: #####
 PROFILE: 1" = 4'
 DRAWING No. 201-4000-12
 SHEET No. 12 OF 22

C:\pw_work\mflnagon\41102116\CRD-PLTS-Grading Plan.dwg Dwg Created: 8-May-22 - _a2 standard bw.stb - Plot Date: 16-May-22



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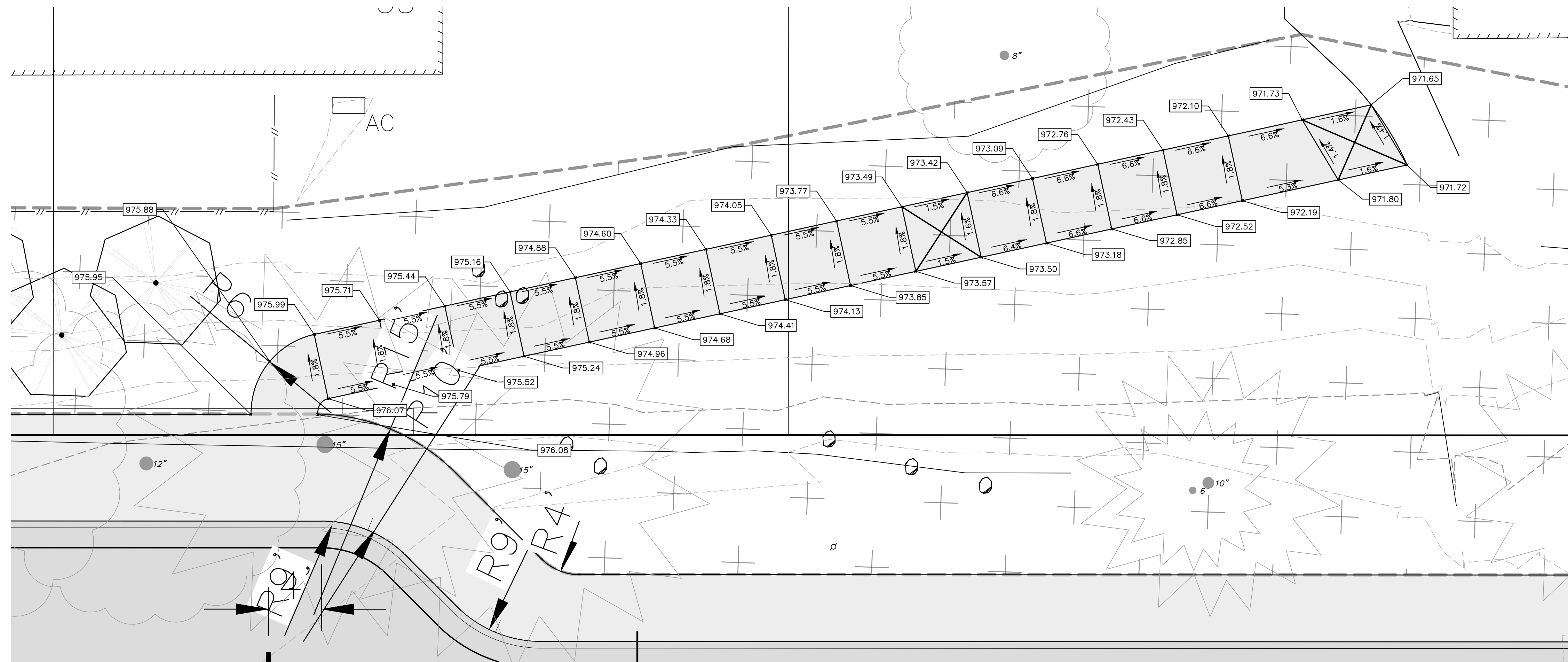
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS
GRADING PLAN

SHEET No. 13 OF 22

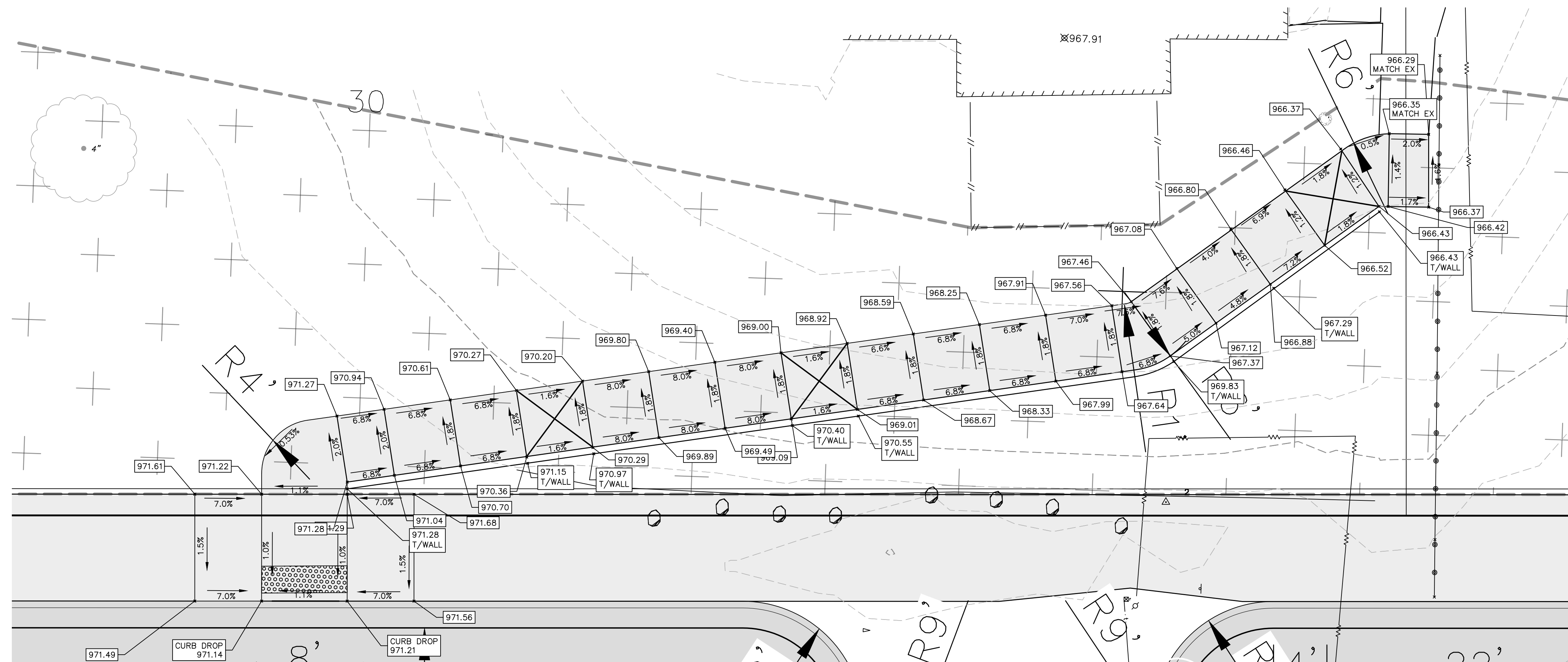
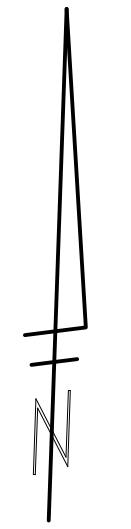
SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING No. 201-4000-13

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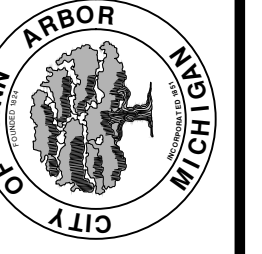


NOTE: EARTHWORK INCLUDING EXCAVATION AND EMBANKMENT REQUIRED TO ACHIEVE PROPOSED GRADES ALONG PRIVATE SIDEWALK RAMP AREA SHALL BE PAID FOR AS PART OF "SIDEWALK GRADING".



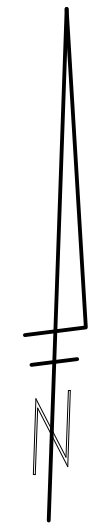
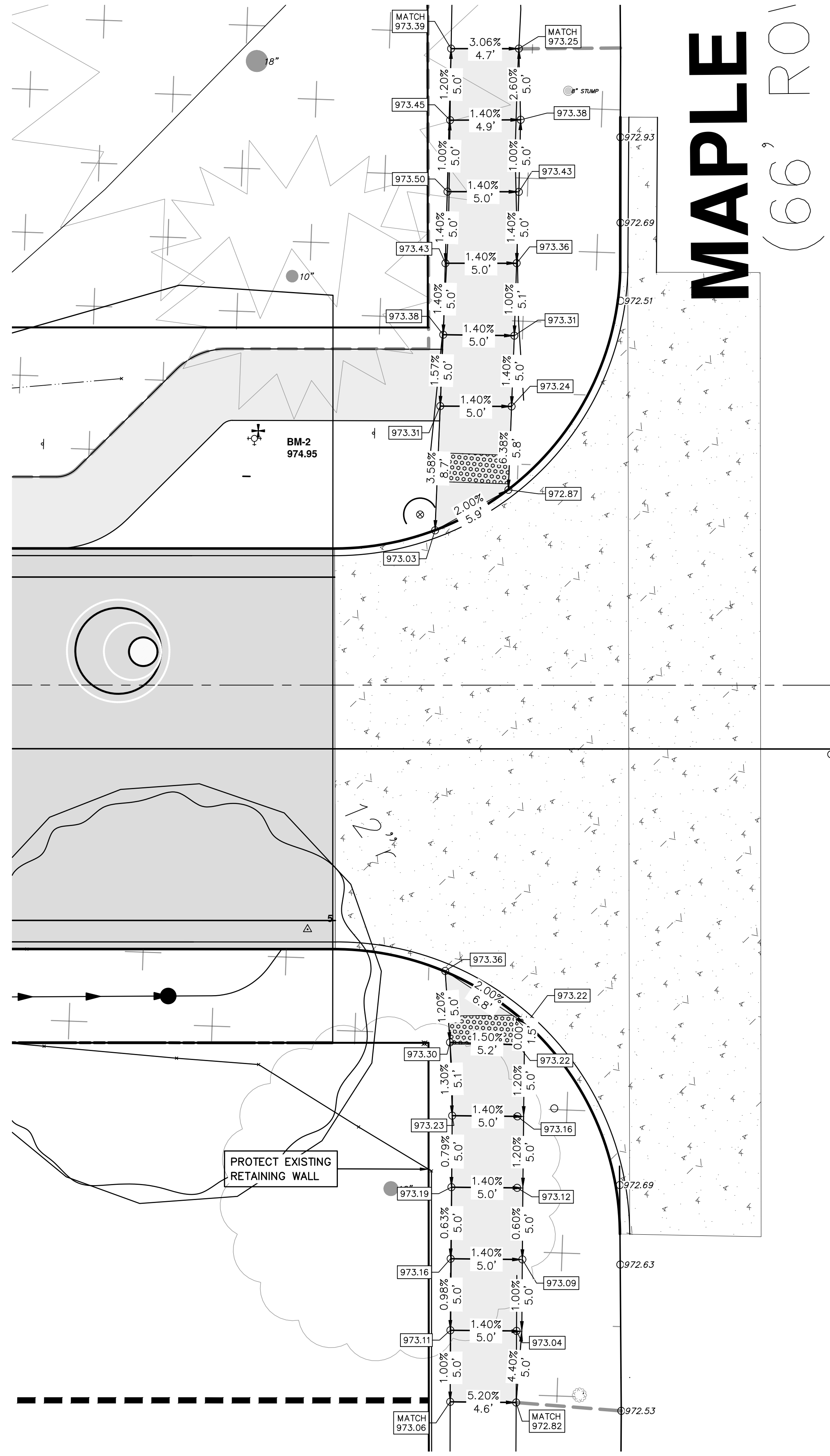
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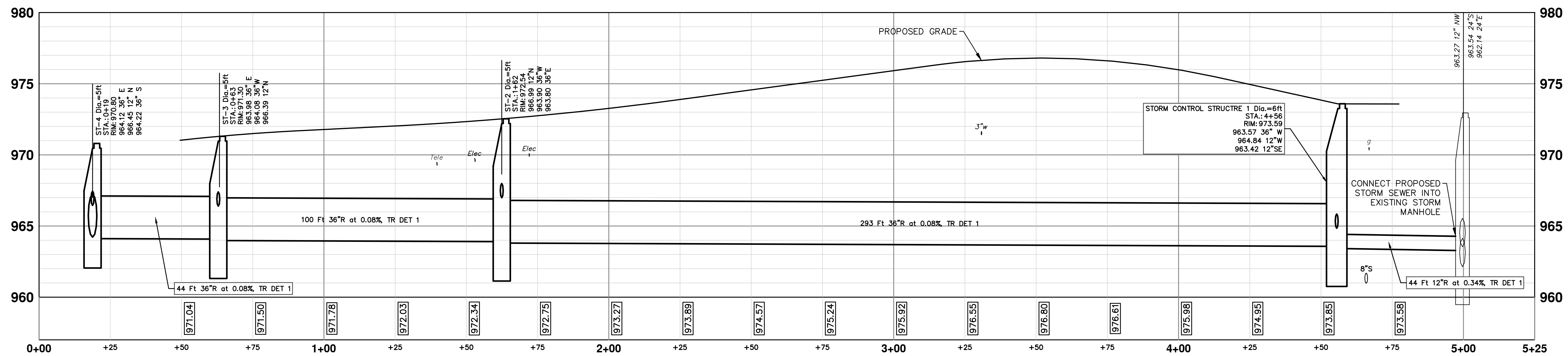
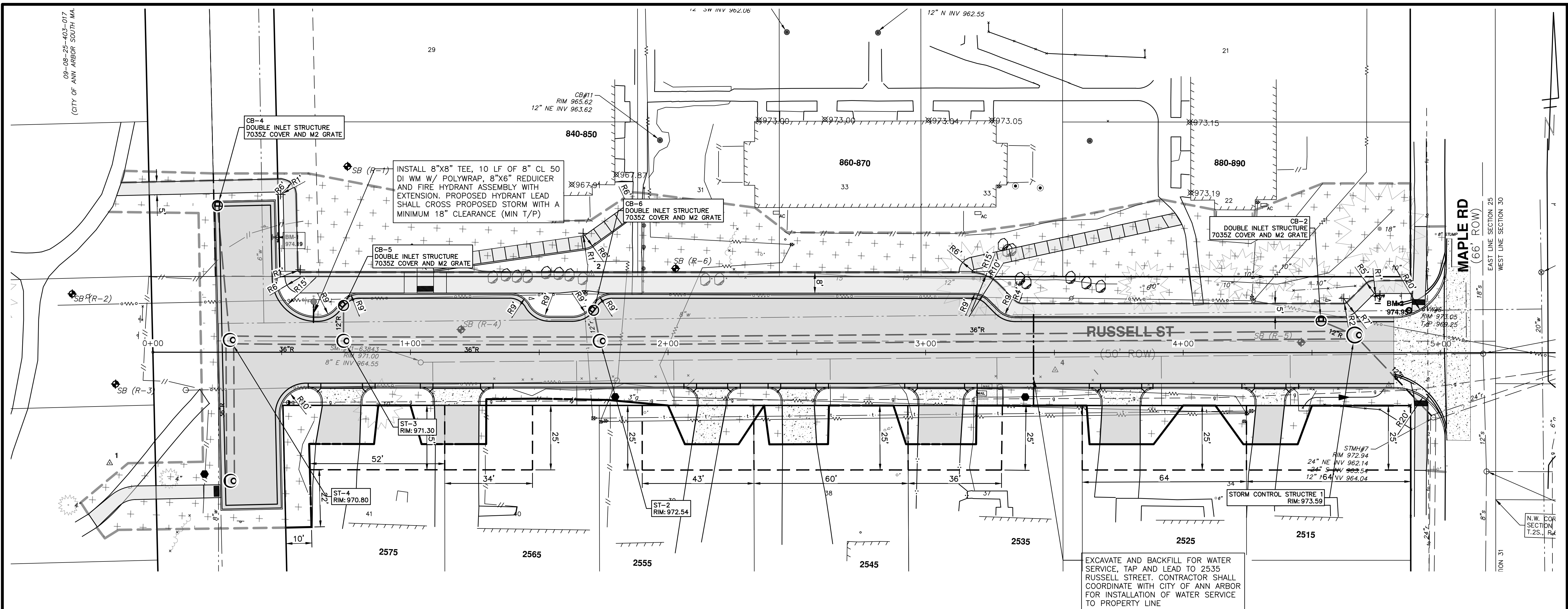


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS
DETAIL GRADES - SIDEWALKS

SCALE PLAN: 1"=45'
PROFILE: 1"=4'
DRAWING No. 201-4000-14
SHEET No. 14 OF 22



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STORM SEWER INSTALLATION AT THE DEPTH SPECIFIED ON THE PLANS WILL LIKELY REQUIRE THE USE OF TRENCH BOXES IN ORDER TO PROTECT EXISTING ADJACENT UTILITIES. THIS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE FOR STORM SEWER.

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

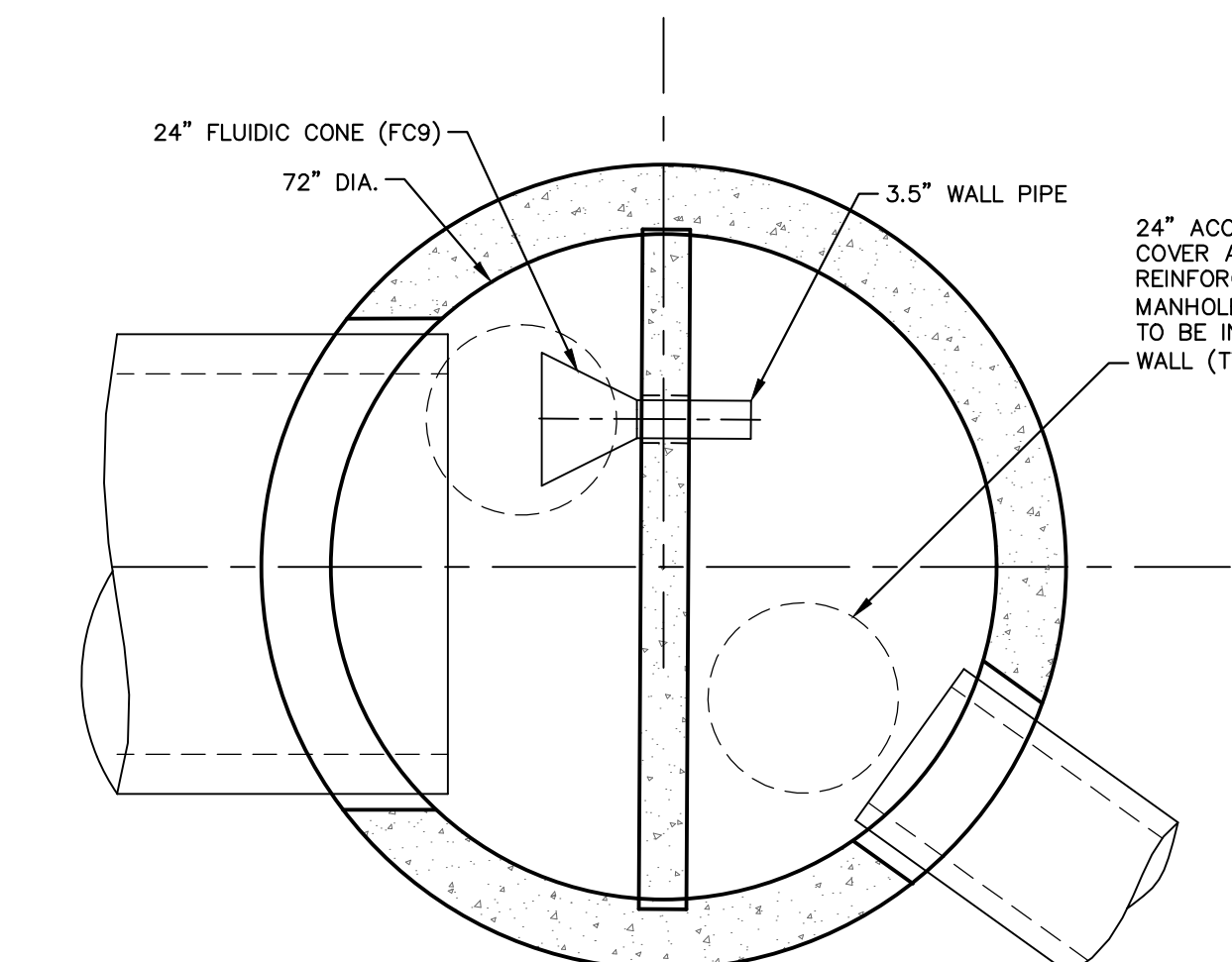
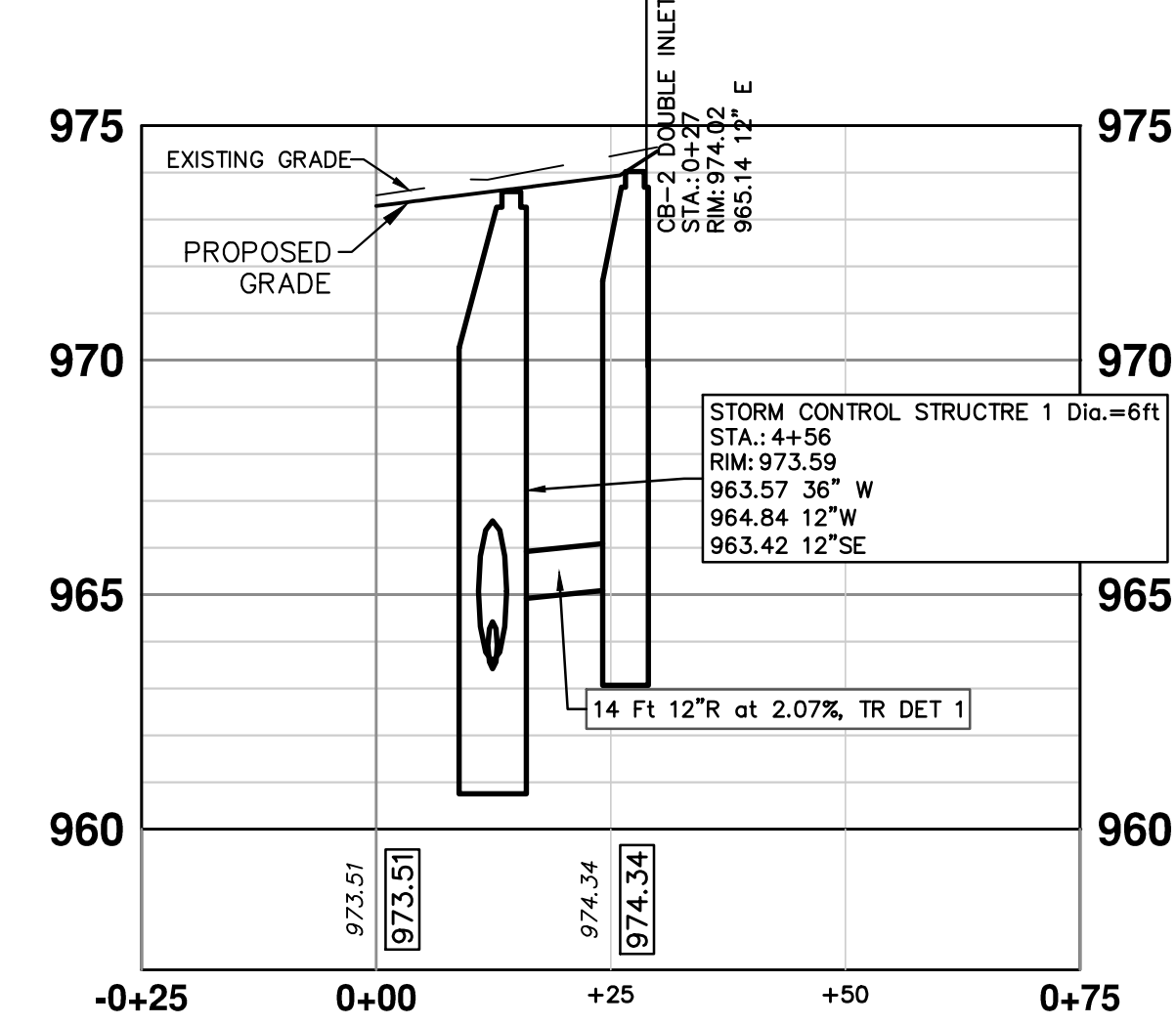
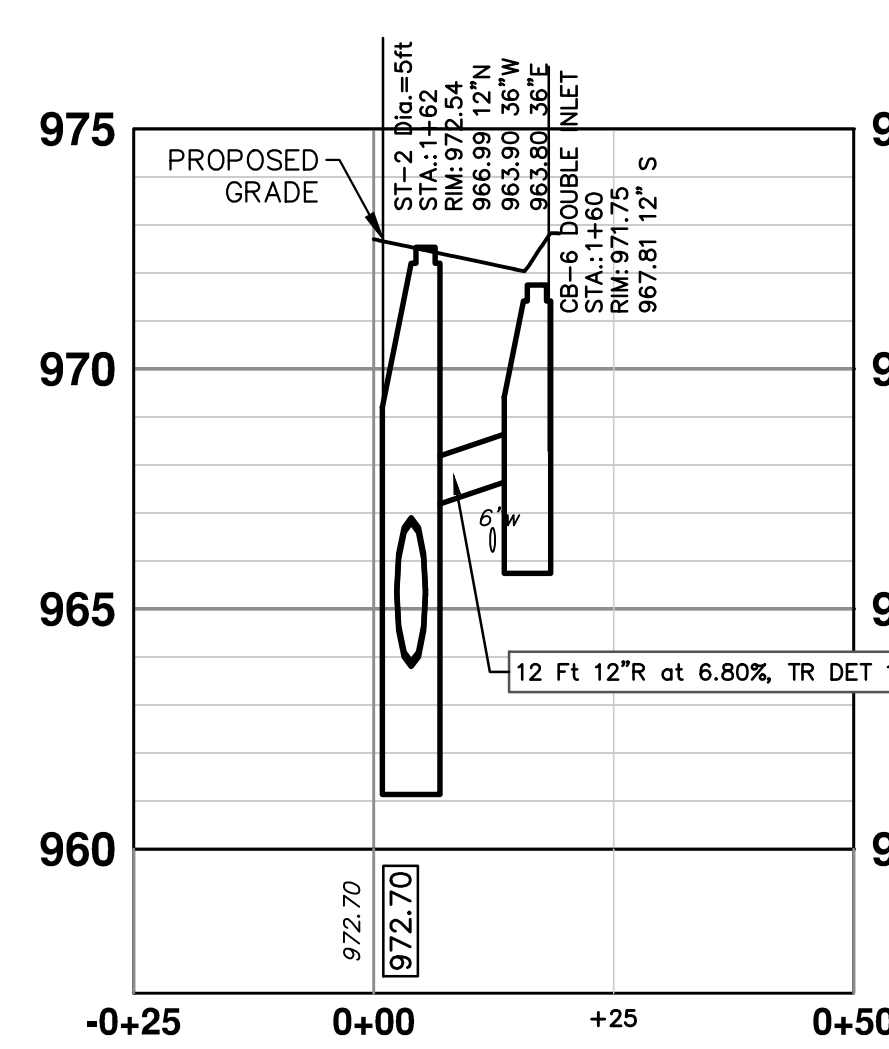
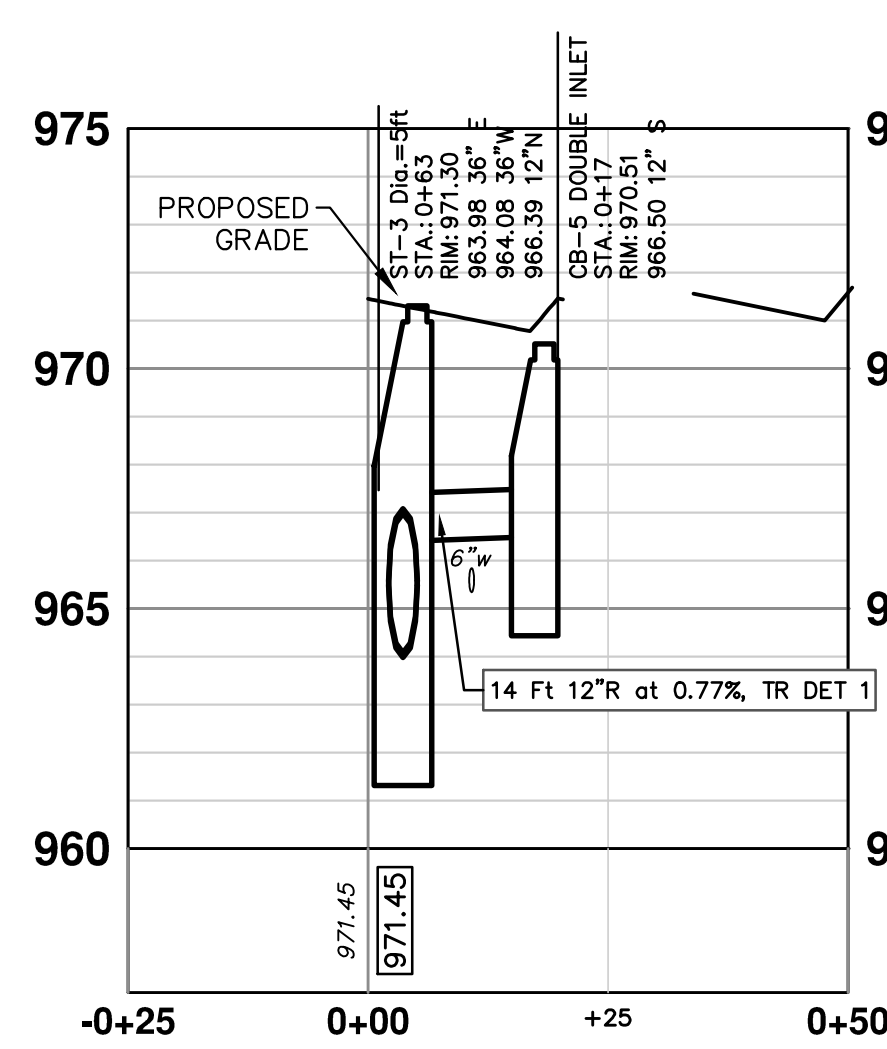
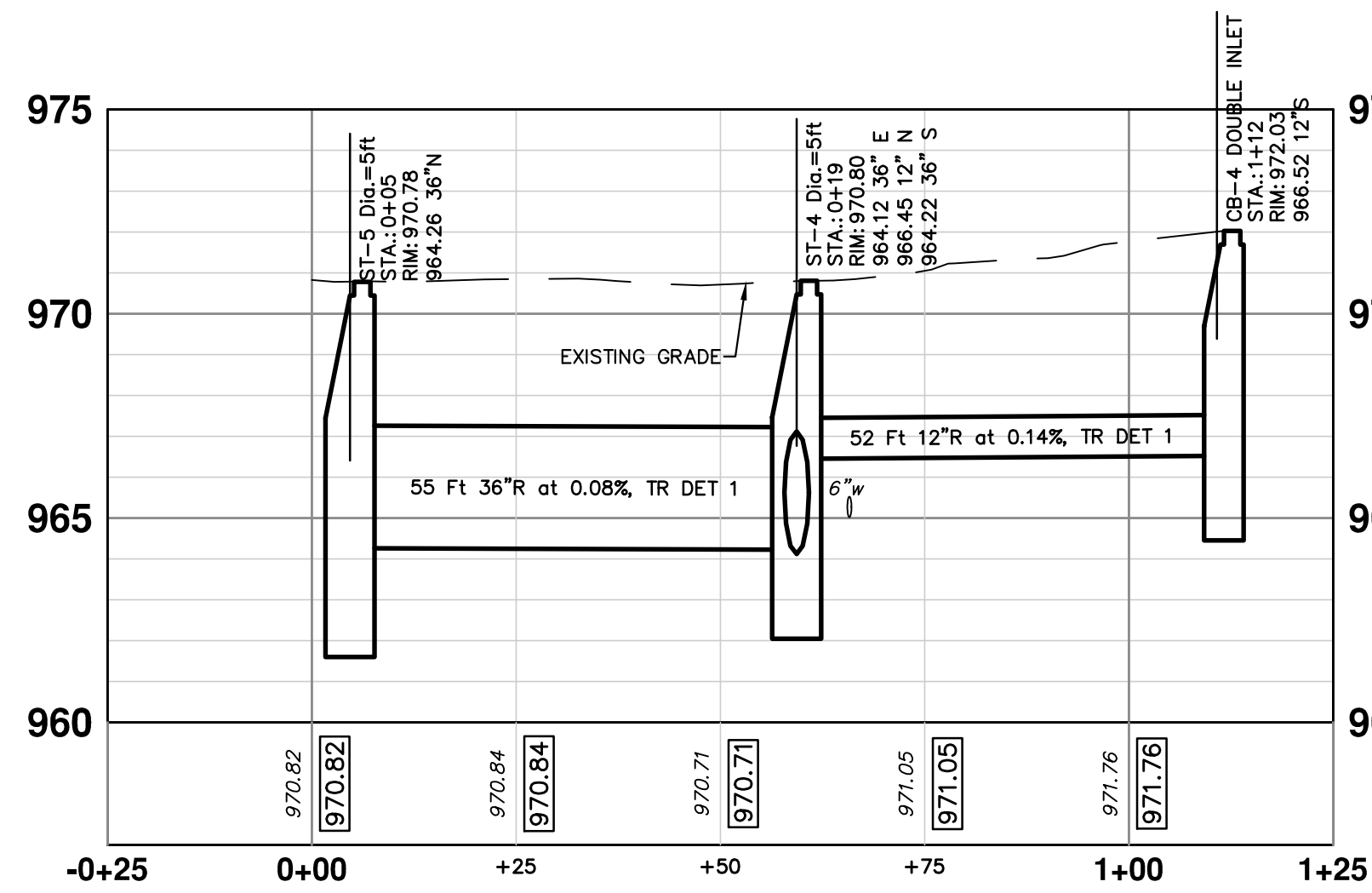
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RUSSELL STREET IMPROVEMENTS
 UTILITY PLAN

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'

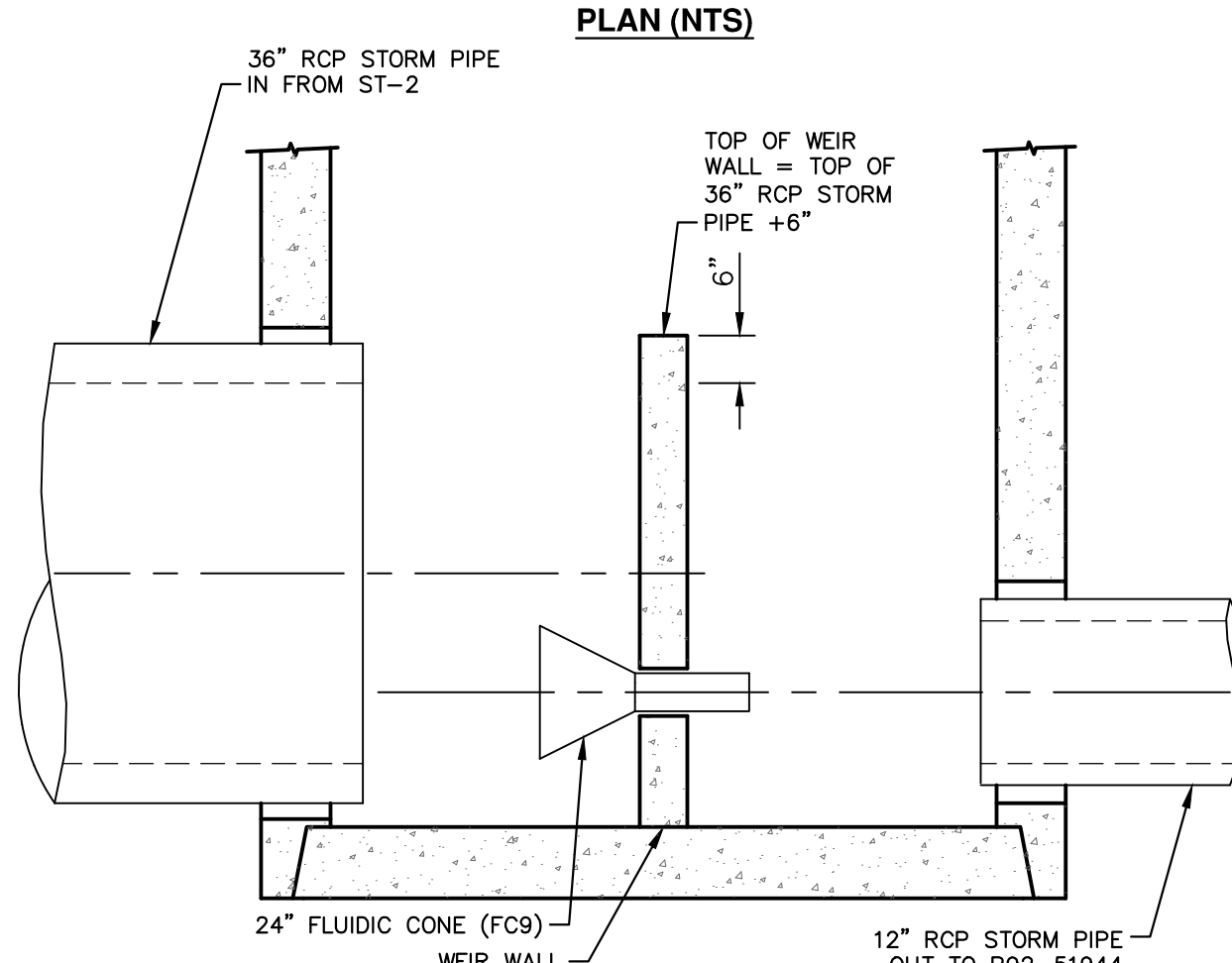
DRAWING No. 201-4000-16
 SHEET No. 16 OF 22

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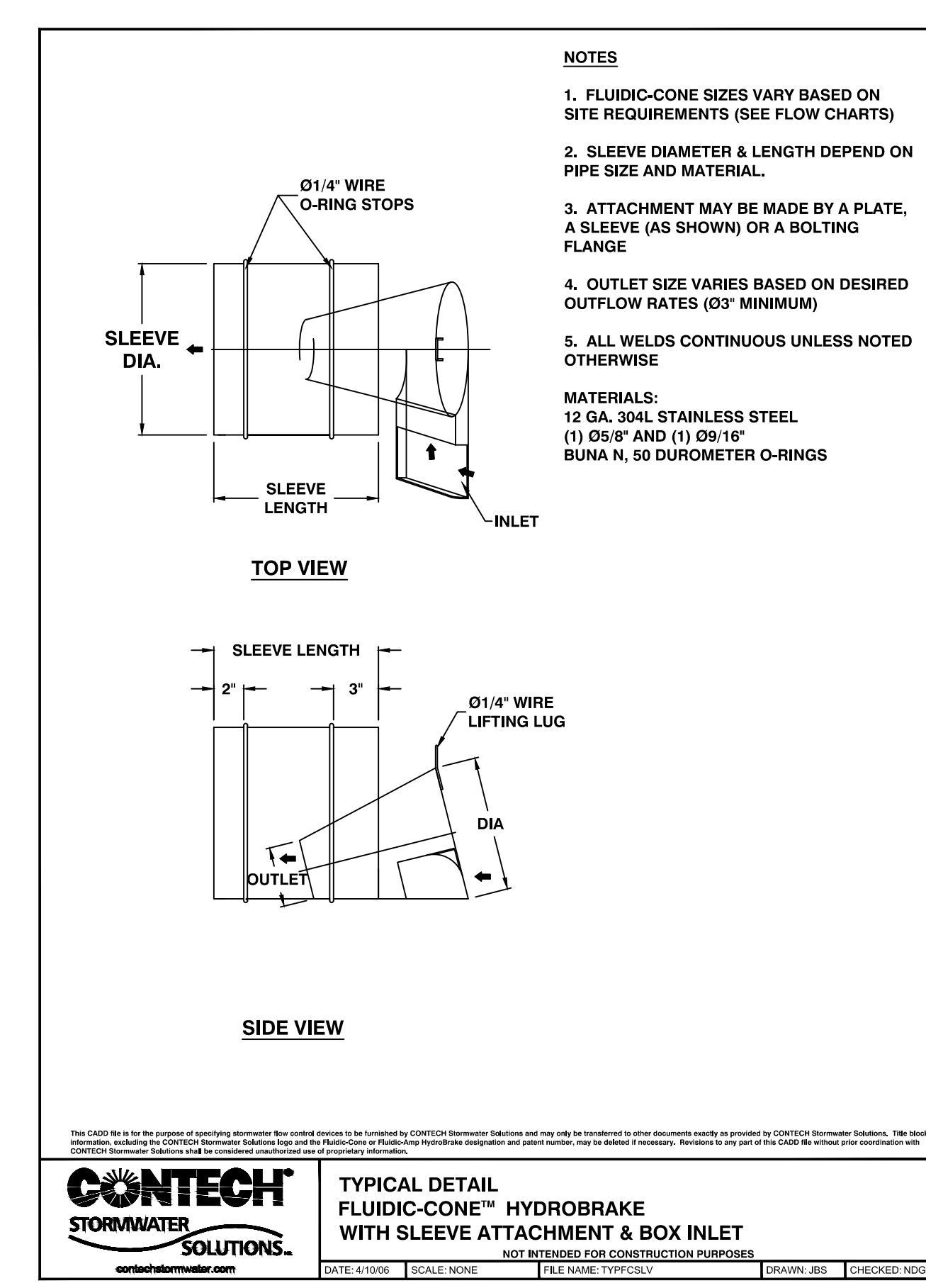


PLAN (NTS)

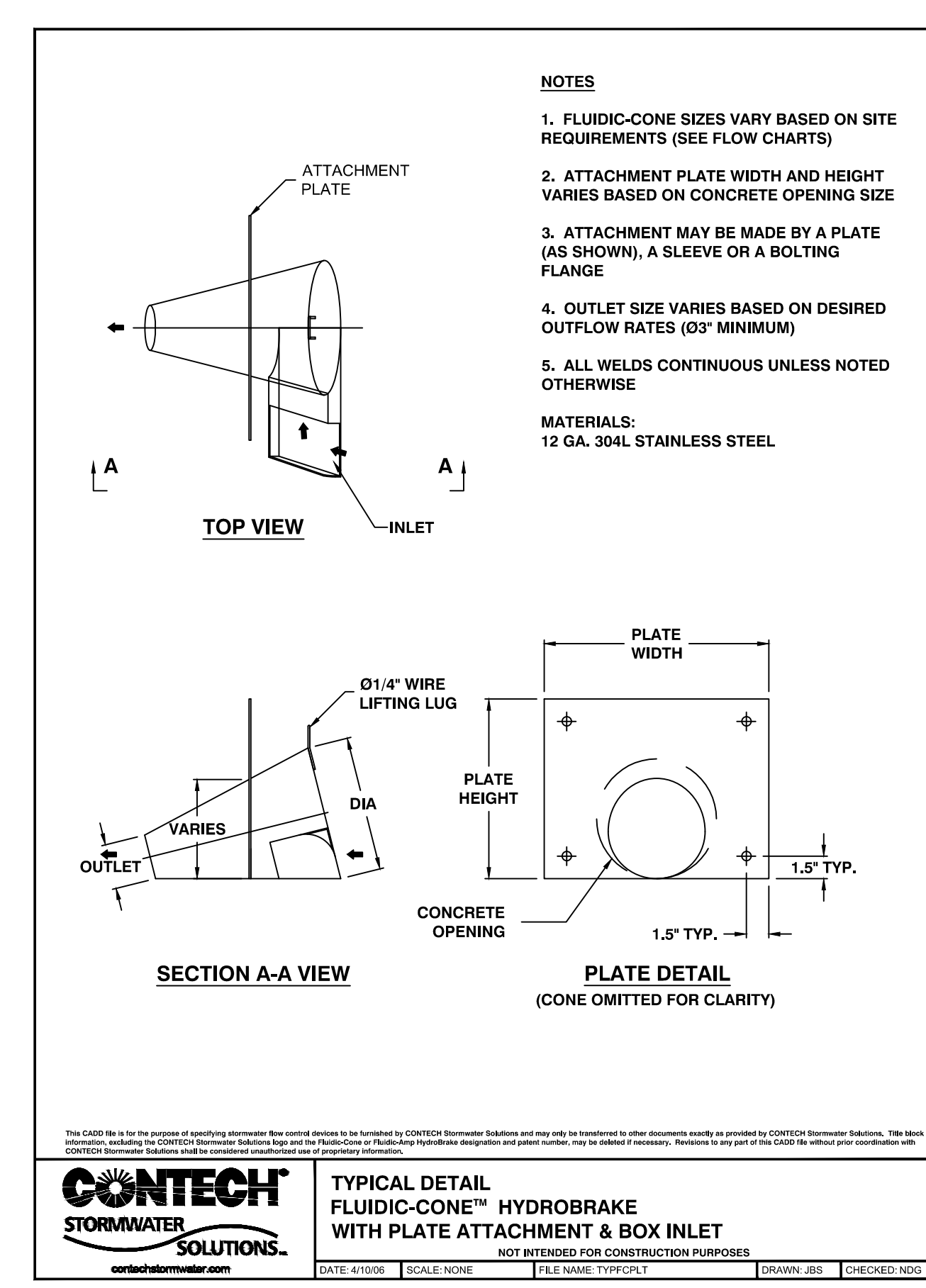


SECTION (NTS)

- NOTE:
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND DESIGN CALCULATIONS FOR EACH OF THE "STORM CONTROL STRUCTURE, 1" ITEMS AND THEY SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
 - "STORM CONTROL STRUCTURE, 1" SHALL BE MANUFACTURED TO ASTM C76-CL2 SPECIFICATIONS FOR HS-20 TRUCK LOADING.
 - REINFORCED CONCRETE DESIGN IS TO COMPLY WITH APPLICABLE MINIMUM REQUIREMENTS SET FORTH IN ACI 350-01(CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
 - TOP SLAB OF STRUCTURE SHALL BE PRE-CAST CONCRETE WITH TWO 24-INCH OPENINGS.
 - STANDARD MANHOLE STEPS TO BE PLACED ALONG THE MANHOLE WALL FOR BOTH ACCESS POINTS.



TYPICAL DETAIL FLUIDIC-CONE™ HYDROBRAKE WITH SLEEVE ATTACHMENT & BOX INLET
DATE: 4/10/06 SCALE: NONE FILE NAME: TYPFCBLY DRAWN: JBS CHECKED: NDG



TYPICAL DETAIL FLUIDIC-CONE™ HYDROBRAKE WITH PLATE ATTACHMENT & BOX INLET
DATE: 4/10/06 SCALE: NONE FILE NAME: TYPFCPLT DRAWN: JBS CHECKED: NDG

INCLUDED IN PAY ITEM FOR STORM CONTROL STRUCTURE 1. THE ABOVE DETAILS ARE EXAMPLES OF THE FLOW RESTRICTION DEVICES REQUESTED FOR THE PROJECT. OTHER SIMILAR DEVICES WILL BE CONSIDERED FOR USE. FLOW RESTRICTION DEVICES MUST CONFORM TO THE DETAILED SPECIFICATION.

UNDERGROUND STORMWATER STORAGE CONTROL STRUCTURE

PAID FOR AS STORM STORM CONTROL STRUCTURE 1

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PROPOSED CATCH BASIN PROFILES

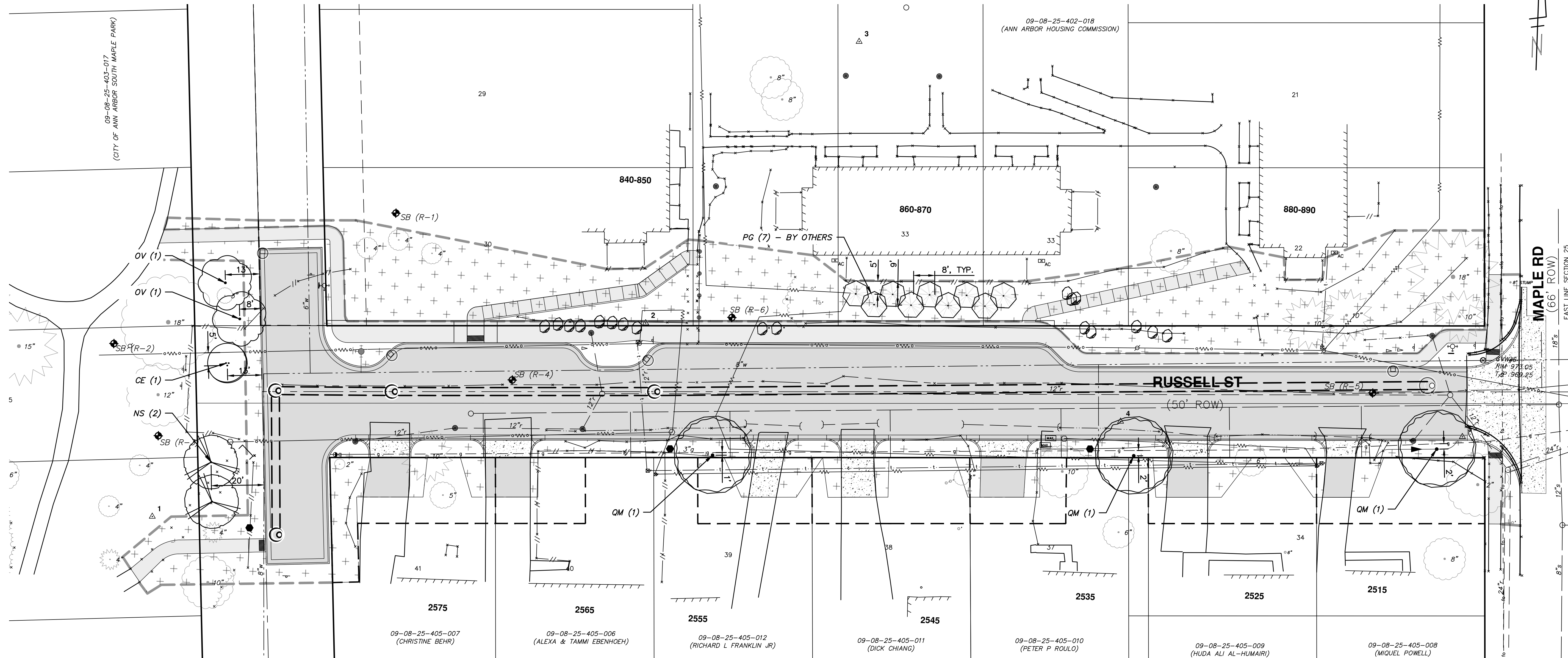
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SCALE PLAN: 1" = 4'
PROFILE: 1" = 4'

DRAWING NO. 2014000-17

SHEET NO. 17 OF 22

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PLANTING SCHEDULE:

TREES						
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
CE	1	<i>Cercis canadensis</i>	Eastern Redbud	6' Clump	B&B	As Shown
NS	2	<i>Nyssa sylvatica</i>	Blackgum	2"	B&B	As Shown
OV	2	<i>Ostrya virginiana</i>	Ironwood	2"	B&B	As Shown
PG	7	<i>Picea glauca</i> 'Densata' (By Others)	Black Hills Spruce	6' H	B&B	As Shown
QM	3	<i>Quercus macrocarpa</i>	Bur Oak	2 1/2"	B&B	As Shown

NOTE:

FINAL TREE LOCATIONS SOUTH OF RUSSELL ST TO BE DETERMINED IN THE FIELD BASED ON GAS LINE AND OTHER UTILITIES.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RUSSELL STREET IMPROVEMENTS

LANDSCAPE PLAN

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING No. 201-4000-18

SHEET No. 18 OF 22

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

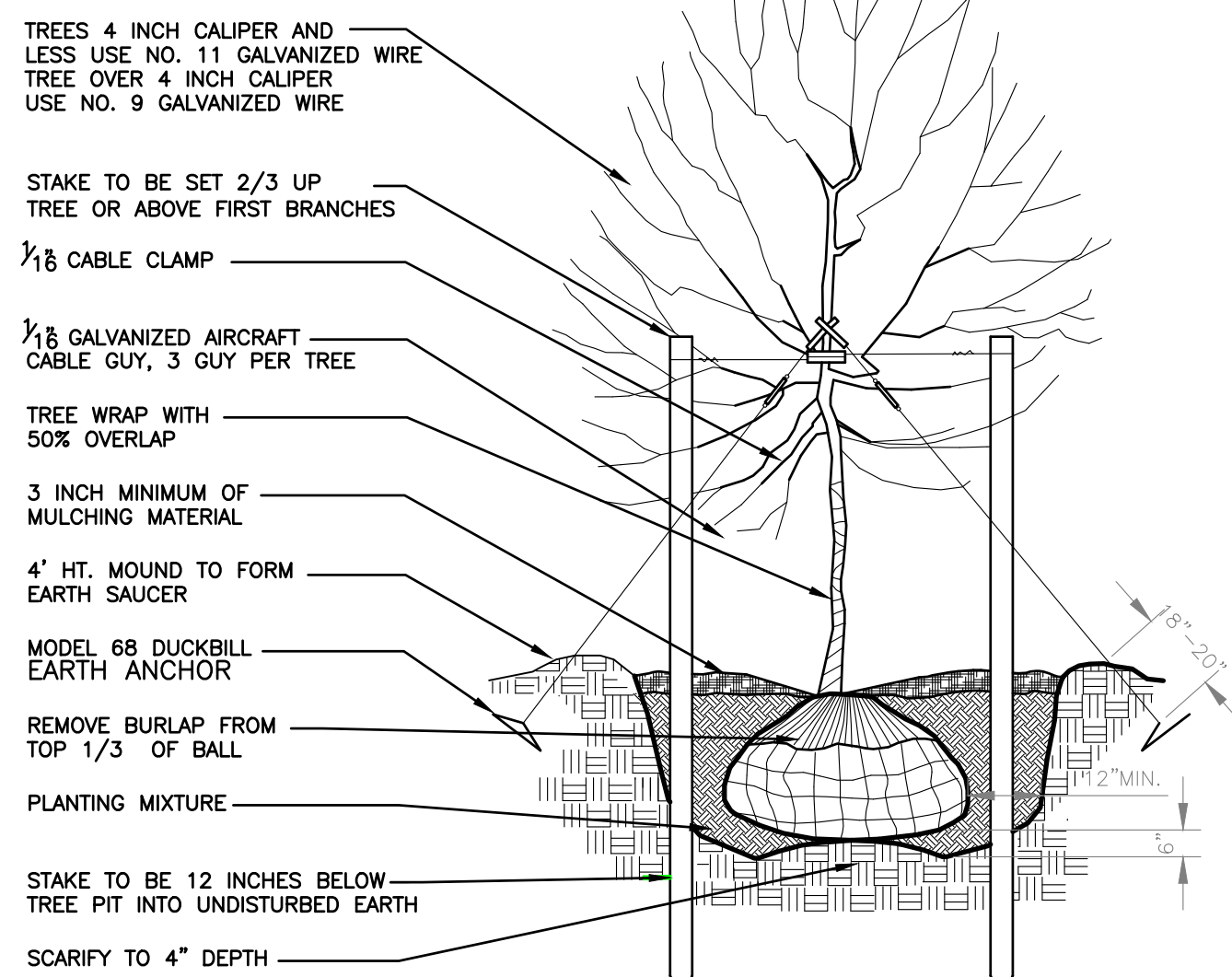
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LANDSCAPE CONSTRUCTION NOTES AND SPECIFICATIONS

1. ALL PLANT MATERIAL SHALL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA).
2. PLANT MATERIAL MUST BE NURSERY GROWN AND MUST BE SELECTED FROM NURSERIES THAT HAVE BEEN INSPECTED AND CERTIFIED BY STATE PLANT INSPECTORS.
3. SOME TREES WITHIN THIS CONTRACT HAVE BEEN PRE-PROCURED BY THE OWNER. THE CONTRACTORS SHALL COORDINATE THE ACQUISITION OF TAGGED TREES WITH THE OWNER (FORD LAND) PRIOR TO BIDDING AND INCLUDE ALL COSTS FOR THE ACQUISITION, INSTALLATION, AND WARRANTY IN THE CONTRACTORS BID.
4. PLANT MATERIAL MOVED OUT OF NORMAL PLANTING SEASON MAY REQUIRE SPECIAL TREATMENT AND ALL COSTS FOR THIS TREATMENT SHALL BE ITEMIZED AND ACCOUNTED FOR IN THE CONTRACTORS BID.
5. ALL TREE PLANTING AND STAKING SHALL BE DONE AFTER IRRIGATION SYSTEM IS INSTALLED AND PRIOR TO ANY OF THE SEEDING OPERATIONS.
6. TAGGED PLANTS DAMAGED IN HANDLING OR TRANSPORTATION CAN BE REJECTED BY THE OWNER OR OWNER REPRESENTATIVE.
7. STAKE ALL TREE LOCATIONS FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO DIGGING HOLES.
8. FERTILIZER: A PRE-PLANTING FERTILIZER SHALL BE PRESSURE FORMED PELLETS AND SHALL WEIGH 22 GRAMS. EACH PELLET SHALL HAVE 20% NITROGEN, 13% WATER INSOLUBLE NITROGEN, 10% AVAILABLE PHOSPHORIC ACID, AND 5% WATER SOLUBLE POTASH. POST-PLANTING FERTILIZER SHALL BE GRANULAR FERTILIZER CONFORMING TO THE REQUIREMENTS OF 2% NITROGEN, 2.1% WATER INSOLUBLE NITROGEN, 25% UREA FORMALDEHYDE, 4% PHOSPHORIC ACID, 8% WATER SOLUBLE POTASH.
9. PREPARED PLANTING SOIL SHALL BE AN IMPORTED MIX OF TOPSOIL, COURSE SAND, AND COMPOST WITH THE APPROXIMATE MIX RATIO BY MOIST VOLUME OF 45-50% UNSCREENED TOPSOIL, 40-50% COURSE SAND, AND 10% COMPOST. PROVIDE A TWO-GALLON SAMPLE WITH TESTING DATA THAT INCLUDES RECOMMENDATIONS FOR CHEMICAL ADDITIVES FOR THE TYPES OF PLANTS TO BE GROWN. SAMPLES AND TESTING DATA SHALL BE SUBMITTED AT THE SAME TIME. PLANTING SOIL MIXTURE SHALL BE FREE FROM STICKS, STONES, SOD CLUMPS, OR OTHER MATERIAL WHICH MIGHT HAVE POCKETS AROUND THE ROOTS.
10. PREPARED BIORETENTION SOIL SHALL BE AN IMPORTED MIX OF TOPSOIL, COURSE SAND, AND COMPOST WITH THE APPROXIMATE MIX RATIO BY MOIST VOLUME OF 20% UNSCREENED TOPSOIL, 70% COURSE SAND, AND 10% COMPOST. PROVIDE A TWO-GALLON SAMPLE WITH TESTING DATA THAT INCLUDES RECOMMENDATIONS FOR CHEMICAL ADDITIVES FOR THE TYPES OF PLANTS TO BE GROWN. SAMPLES AND TESTING DATA SHALL BE SUBMITTED AT THE SAME TIME. BIORETENTION SOIL MIXTURE SHALL BE FREE FROM STICKS, STONES, SOD CLUMPS, OR OTHER MATERIAL WHICH MIGHT HAVE POCKETS AROUND THE ROOTS.
11. INSTALL ALL TREES AS SHOWN IN THE DETAILS. ALL TREES SHALL BE SET PLUMB, BACKFILLED, AND THOROUGHLY WATERED PRIOR TO STAKING.
12. ALL TREES SHALL BE WARRANTED FOR ONE YEAR FROM THE TIME OF FINAL ACCEPTANCE BY THE OWNER.
13. ALL DISTURBED LAWN AREAS SHALL BE RESTORED WITH 4-INCHES OF TOPSOIL, SPREAD, FINE GRADED, AND SODDED AS SPECIFIED. PRIOR TO INSTALLATION OF TOPSOIL, LOOSEN SUBGRADE TO A DEPTH OF 2 INCHES. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
14. ALL PLANTING SHALL BE GUARANTEED FOR A PERIOD OF ONE GROWING SEASON. ALL DISEASED, DAMAGED, OR DEAD MATERIAL SHOWN ON THE SITE PLAN SHALL BE REPLACED AT THE END OF THE ONE GROWING PERIOD.

NOTE: STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

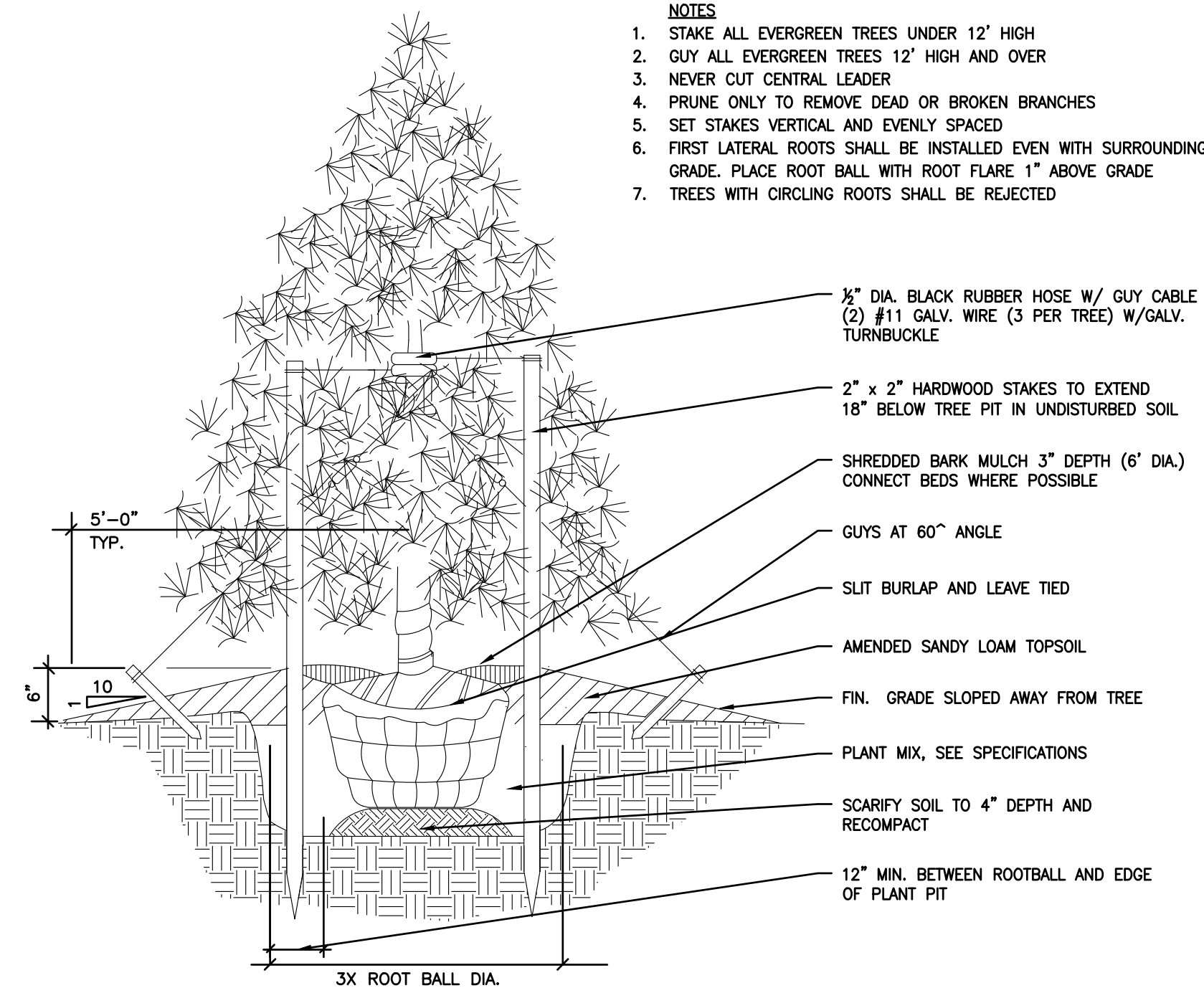


DECIDUOUS TREE PLANTING DETAIL

NO SCALE

NOTES

1. STAKE ALL EVERGREEN TREES UNDER 12' HIGH
2. GUY ALL EVERGREEN TREES 12' HIGH AND OVER
3. NEVER CUT CENTRAL LEADER
4. PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES
5. SET STAKES VERTICAL AND EVENLY SPACED
6. FIRST LATERAL ROOTS SHALL BE INSTALLED EVEN WITH SURROUNDING GRADE. PLACE ROOT BALL WITH ROOT FLARE 1" ABOVE GRADE
7. TREES WITH CIRCLING ROOTS SHALL BE REJECTED



EVERGREEN TREE DETAIL

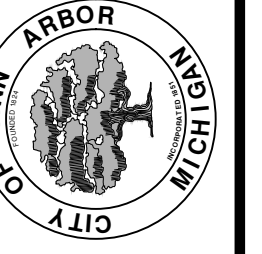
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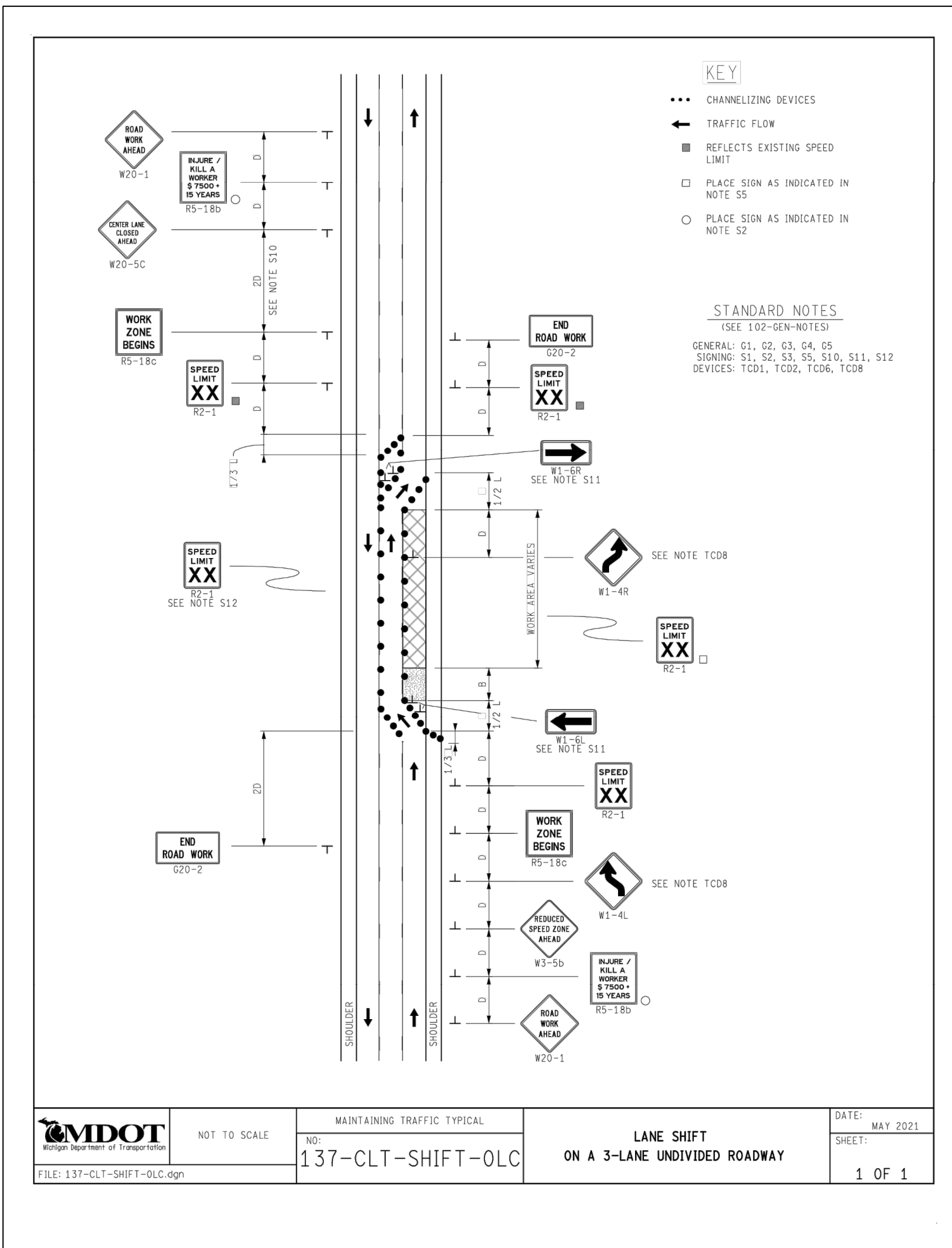
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RUSSELL STREET IMPROVEMENTS
LANDSCAPE NOTES & DETAILS

SCALE PLAN: #####
PROFILE: 1" = 4'
DRAWING No. 2014000-19



DISTANCE BETWEEN TRAFFIC SIGNS, "D"

DISTANCES	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
D (FEET)	250	300	350	400	450	500	550	600	650	700	750

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"

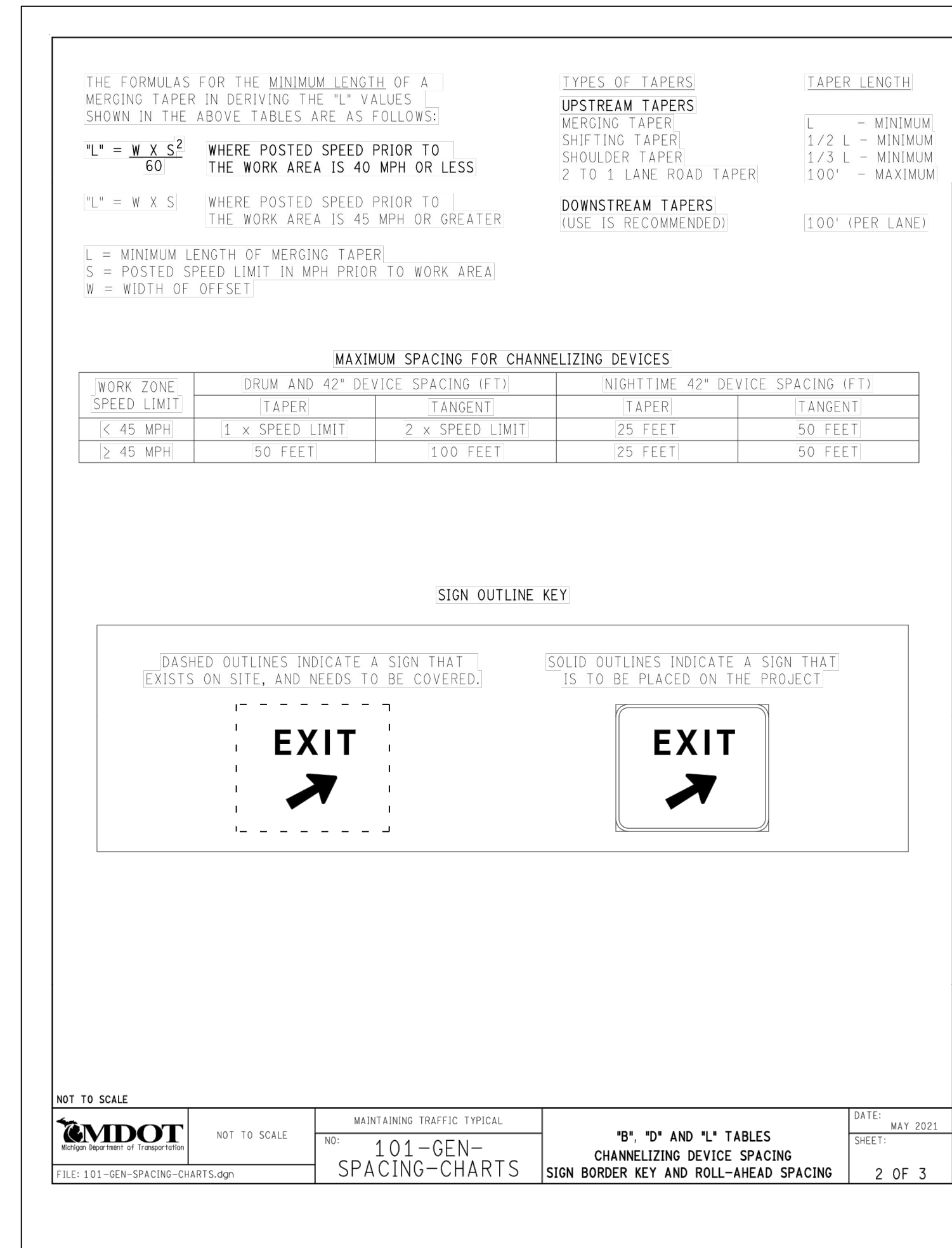
"B" LENGTHS	SPEED* MPH (PRIOR TO WORK AREA)											
	20	25	30	35	40	45	50	55	60	65	70	75
B (FEET)	33	50	83	132	181	230	279	329	411	476	542	625

* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

MINIMUM MERGING TAPER LENGTH, "L" (FEET)

OFFSET (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
1	11	15	21	27	45	50	55	60	65	70	75
2	21	30	41	54	90	100	110	120	130	140	150
3	32	45	62	80	135	150	165	180	195	210	225
4	42	60	82	107	180	200	220	240	260	280	300
5	53	75	103	134	225	250	275	300	325	350	375
6	63	90	123	160	270	300	330	360	390	420	450
7	73	105	143	187	315	350	385	420	455	490	525
8	84	120	164	214	360	400	440	480	520	560	600
9	94	135	184	240	405	450	495	540	585	630	675
10	105	150	205	267	450	500	550	600	650	700	750
11	115	165	225	294	495	550	605	660	715	770	825
12	125	180	245	320	540	600	660	720	780	840	900
13	136	195	266	347	585	650	715	780	845	910	975
14	146	210	286	374	630	700	770	840	910	980	1050
15	157	225	307	400	675	750	825	900	975	1050	1125

MDOT NOT TO SCALE
NO: 101-GEN-SPACING-CHARTS
DATE: MAY 2021
SHEET: 1 OF 3



GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES - TEST LEVEL 2

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5.5 TONS (STATIONARY)	40 MPH OR LESS	25 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES - TEST LEVEL 3

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5 TONS (MOBILE)	45 MPH	100 FT
	50-55 MPH	150 FT
	60-75 MPH	175 FT
12 TONS (STATIONARY)	45 MPH	25 FT
	50-55 MPH	25 FT
	60-75 MPH	50 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.

MDOT NOT TO SCALE
NO: 101-GEN-SPACING-CHARTS
DATE: MAY 2021
SHEET: 3 OF 3

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RUSSELL STREET IMPROVEMENTS

MDOT TRAFFIC DETAILS

SCALE: NTS
DRAWING No: 201-4000-20
SHEET No: 20 OF 22

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RUSSELL STREET WORK PEDESTRIAN DETOUR

- LEGEND**
- ← PEDESTRIAN DETOUR ROUTE
 - H TYPE III BARRICADES
 - T TEMPORARY SIGN

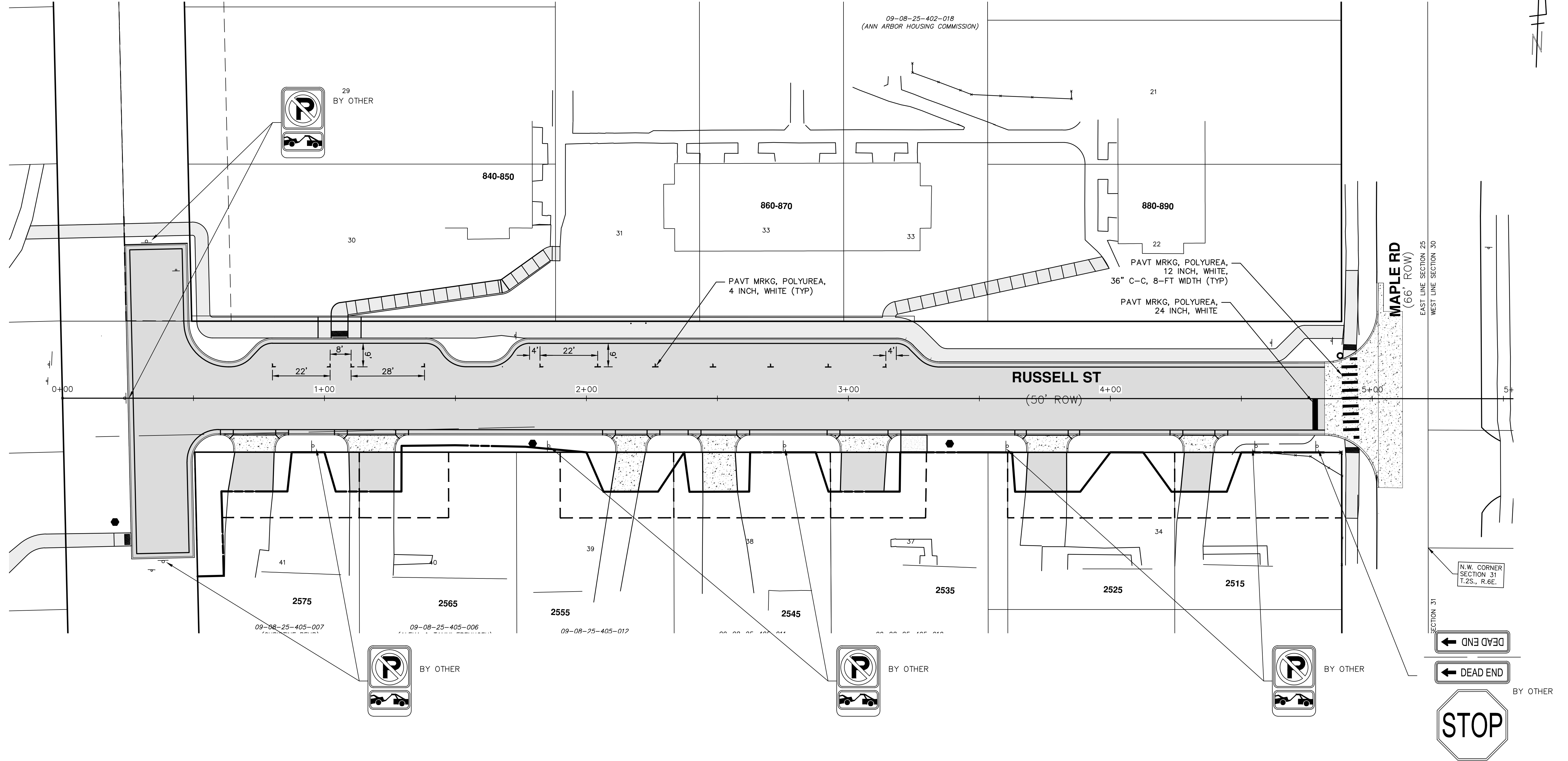
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M4-9h
① |
R9-11aR
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R9-11aL
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R9-11R
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M4-9h
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M4-9gL
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M4-9gR
⑧ |
M4-9i
⑨ | |



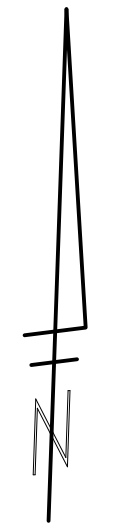
 CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-1667 www.aagov.org	SCALE PLAN: ##### DRAWING No. 2014000-21	CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING RUSSELL STREET IMPROVEMENTS PEDESTRIAN DETOUR ROUTE	SHEET No. 21 OF 22
REV.	DESCRIPTION	DATE	DRAWN CHECKED



C:\pw_work\g1102116\CSP-PLTS-Sign-PavMk.dwg Dwg Created: 18-Apr-22 -- a2 standard bw.stb -- Plot Date: 16-May-22



NOTE:
 CONTRACTOR SHALL NOTIFY MARC MORENO AT THE CITY SIGN SHOP AT LEAST 3 BUSINESS DAYS PRIOR TO REMOVAL OR INSTALLATION OF SIGNING.



CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-1667 www.a2gov.org	DESCRIPTION REV. DATE DRAWN CHECKED
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING RUSSELL STREET IMPROVEMENTS SIGNAGE AND PAVEMENT MARKING PLAN	
SCALE PLAN: 1" = 20' PROFILE: 1" = 4' DRAWING No. 2014000-22	SHEET No. 22 OF 22